

Repair Manual Audi TT 2015 ➤ Audi TT Roadster 2015 ➤

Electrical Equipment

Edition 12.2021



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Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

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00 – General, Technical Data

1 Safety Precautions

(Edition 12.2021)

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- ⇒ P1.2 recautions during Road Test with Testing Equipment", page 1
- ⇒ a1.3 nd Safety Precautions for LED Headlamp and Audi Laser Lamp", page 1
- ⇒ H1.4 eadlamps Usage and Safety Precautions", page 2

1.1 Safety Precautions when Working on Vehicles with Start/Stop System

There is a risk of injury due to the engine starting unexpectedly.

The engine may start unexpectedly in vehicles with the Start/ Stop System activated. A message in the instrument cluster indicates whether the Start/Stop System is activated.

Deactivate the Start/Stop System: switch off the ignition.

1.2 Safety Precautions during Road Test with Testing Equipment

There is a risk of injury due to unsecured testing equipment.

If the front passenger airbag activates during a collision, unsecured testing equipment becomes a dangerous projectile.

Secure testing equipment on the rear seat.

or

 Have a second person operate testing equipment on the rear seat.

1.3 Application and Safety Precautions for LED Headlamp and Audi Laser Lamp

There is a risk of injury due to UV radiation and grame ercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. APDI AG does not guarantee or accept any liability

Eye and skin damage threspossible when the meadlamps are the copyright by AUDI AG. turned on.

- Do not look into the beam of light.
- Switch off the ignition and all electrical equipment, and place the ignition key outside of the vehicle.
- Do not operate the flashers.
- Only assemble the LED headlamps according to the repair manual.

1.4 HID Headlamps Usage and Safety Precautions

Risk of Injury Due to Electrocution

When the headlamps are switched on, the HID headlamp components marked with the yellow high-voltage symbol are under high voltage. Electric shock may occur if components are contacted.

- Never touch the components marked with the yellow highvoltage symbols when the lighting is switched on.
- When performing procedures, switch off the ignition and all electrical equipment, and place the ignition key outside of the vehicle.
- Do not operate the flashers.

Risk of Injury from Burning, UV Radiation, Blinding and Explosions of the HID Headlamp Bulbs.

- Only operate the HID headlamp bulb in the peadlamp hours by copyright. Copying for private or commercial purposes, in part or in whole, is not peadlamp hours by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Do not look in the light beam.
- Avoid contact with burst bulb glass.
- Remove and install the HID headlamp bulb with protective eyewear and gloves.

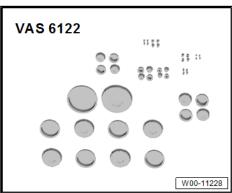
2 Repair Information

- ⇒ f2.1 or Clean Working Conditions", page 3
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2.1 Guidelines for Clean Working Conditions

Even Small Pieces of Debris Can Cause Faults. For this Reason Follow the Rules of Cleanliness when Working:

- Thoroughly clean the connection locations/maintenance openings and the area around them prior to loosening/open-
- Immediately seal off any open lines and connections with clean plugs, for example from the Engine Bung Set -VAS6122-.



- Place removed parts on a clean surface and cover them with lint-free cloths.
- Carefully cover or seal opened components if repairs are not performed immediately.
- Only install clean parts: remove the replacement parts from their packaging just before installing them. Do not use any parts that have been kept out of packaging (for example, in a toolbox).
- Do not work with compressed air when the system is open.
- Protect the disconnected connectors from dirt and moisture and only connect when they are dry.

2.2 General Information

Risk of destroying the electronic components

vate or commercial purposes, in part or in whole, is not Electrical components could be damaged whelm discommediagnot guarantee or accept any liability the battery. the battery.

Only disconnect the battery when the ignition is switched off.

2.3 Contact Corrosion

Contact corrosion can occur if incorrect fasteners (bolts, nuts, washers, etc.) are used.

For this reason, only fasteners with a special surface coating may be installed.

Rubber or plastic parts and adhesives are also made of nonconductive materials.

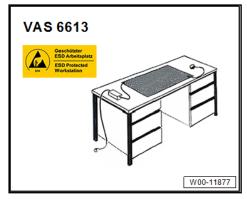
If there are doubts about whether parts can be used or not, then use new parts. Refer to the ⇒ Electronic Parts Catalog (ETKA).

Note:

- Only original replacement parts are recommended. They are checked and compatible with aluminum.
- ◆ The use of Audi accessories is recommended.
- Contact corrosion damage is not covered under warranty.

2.4 Electro-Static Discharge Work Surface

- When handling an open housing, make sure that no oil, grease, silicone or other such materials can come in contact with the components of the open housing; otherwise, they can evaporate and create deposits.
- Touching electronic circuits with bare hands can lead to migration.
- ESD (electro static discharge) protection: Always follow the German Industry Standardization EN 613-40-5-1 when handling.
- Components, assemblies or electronics that have fallen down cannot be used again.
- ESD Work Surface -VAS6613-. Refer to ⇒ Electrical System General Information; Rep. Gr. 97; ESD Work Surface VAS6613.



2.5 Line Routing and Securing

There is a risk of damaging the lines.

The lines can be damaged by the moving or hot components.

- Route the wires in the original cable guide.
- Replace a damaged cable tie and cable bracket.

Ensure sufficient clearance to moving or hot components.

Mark the individual hydraulic and vacuum lines or the wires before removing them. This will prevent interchanging them and will ensure they are installed in the original locations. Draw sketches or take pictures of them if needed.

2.6 Identification Plates

When replacing vehicle components, the existing identification plates on the old parts that indicate the replacement part number (refer to ⇒ Electronic Parts Catalog (ETKA)), must be applied to the new part according to the specifications.

2.7 Impact Wrench, Using

Removing bolts and nuts using an impact wrench is generally permitted. The exception to this are procedures within an open cept any liability high-voltage battery. Generally no impact wrench is permitted by AUDI AG. for these procedures.

If the following requirements are met, using an impact wrench to tighten bolts and nuts is permitted during repair procedures. Electric and compressed air impact wrenches are generally intended here.

Requirements:

- Bolts with locking fluid or self-locking nuts must only be screwed in at low speeds.
- Use a suitable impact wrench with an adjustable speed and torque range.
- Use suitable screwdriver bits near delicate surfaces. For example, use plastic-coated bits on aluminum rims.
- Refer to the Natural Gas Fuel Systems General Information repair manual when working in a natural gas fuel system area.

Application:

- Position the bolts or nuts by hand.
- Only tighten the bolts or nuts with an impact wrench until the head of the bolt or nut contacts the surface and then tighten further using a torque wrench.
- Clean the threaded pins before removing the bolt or nut.

2.8 Engine, Cleaning

To prevent damage to electric/electronic components, note the following:

 During any cleaning procedures on the vehicle, the water jet of the pressure washer must never be directed onto electric/electronic components such as high-voltage components, connectors, sensors, actuators, starters, generators and belt starter generators.



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Battery, Starter, Generator, Cruise Control

Battery

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- ⇒ D1.2 isconnecting and Connecting", page 9
- ⇒ C1.3 able with Battery Monitoring Control ModuleJ367, Removing and Installing", page 11
- ⇒ R1.4 emoving and Installing", page 12
- ⇒ C1.5 harging", page 16
- 1.1 **Overview - Battery**



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1 - Nut

□ 20 Nm

2 - Battery

- □ Checking. Refer to
 ⇒ Electrical Equipment
 General Information;
 Rep. Gr. 27; Battery,
 Checking.
- Removing and Installing. Refer to ⇒
 R1.4 emoving and Installing", page 12.

3 - Positive Cable

To the engine

4 - Nut

□ 20 Nm

5 - Bolt

6 - Nut

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7 - Main Fuse Box

- ☐ In the luggage compartment at the right rear side of the battery
- Disconnecting and Connecting. Refer to
 ⇒ D1.2 isconnecting and Connecting", page
 9

8 - Nut

□ 20 Nm

9 - Positive Terminal Cover

10 - Retaining Bracket

11 - Battery Cover

Equipped on some models

12 - Nut

□ 20 Nm

13 - Wire

- ☐ For the Battery Monitoring Control Module -J367-
- ☐ Follow the sequence when connecting the ground cable. Refer to <u>⇒ page 10</u>.

14 - Ground Wire

- ☐ With Battery Monitoring Control Module -J367-
- ☐ Disconnecting and Connecting. Refer to ⇒ D1.2 isconnecting and Connecting", page 9.
- □ Removing and Installing. Refer to ⇒ C1.3 able with Battery Monitoring Control ModuleJ367, Removing and Installing", page 11.

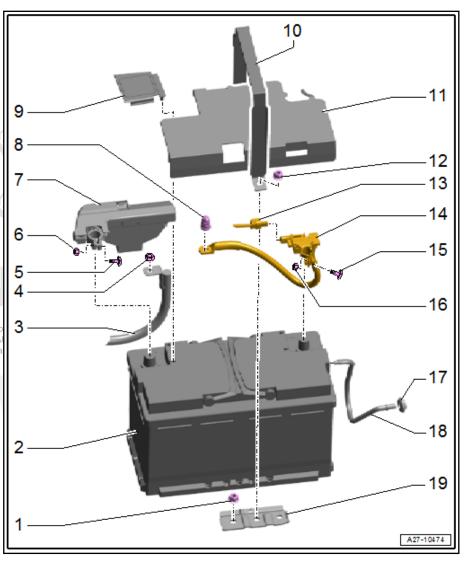
15 - Bolt

16 - Nut

□ 6 Nm

17 - Grommet

□ For the central venting system hose





- 18 Central Venting System Hose
- 19 Battery Bracket

1.2 Battery, Disconnecting and Connecting



Caution

There is the risk of an accident.

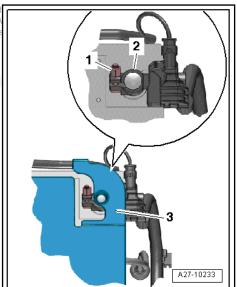
When working on pyrotechnic components (such as airbags and belt tensioners), the battery must be disconnected when the ignition is switched on, contrary to the following description.

Risk of reducing agent leaking out on vehicles with an SCR system.

- After switching off the ignition, the reducing agent flows back into the reducing agent tank via the metering line to the Reducing Agent Injector -N474-.
- Before working in this area, wait at least 10 minutes after switching off the ignition so that the recirculation process can be completed.
- Only after this is complete can the battery be disconnected. Again, this could take up to 10 minutes after switching off the ignition.

Disconnecting

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- Move the driver seat all the way to the rear.
- Switch off the ignition.
- Lift the luggage compartment floor covering by the handle and fold it forward.
- Open the cover -3- over the battery negative terminal.
- Loosen the nut -1- several turns and remove the battery ground cable clamp -2- from the battery terminal.

Connecting



WARNING

Risk of airbag deployment after incorrect repair when disconnecting the battery.

- Risk of injury! There must not be anyone in the vehicle interior when connecting the battery.
- Disconnect the connector -2- from the Battery Monitoring Control Module -J367- -3-.



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- Attach the battery ground cable clamp by hand to the battery negative terminal "-" and tighten the nut -1-.
- Reconnect the connector to the Battery Monitoring Control Module -J367-.



WARNING

Risk of airbag deployment after incorrect repair when disconnecting the battery.

 Risk of injury! Switching on the ignition (key/button) after assembly may only be done when the driver seat is positioned all the way back.

When the battery is reconnected, the following steps must be performed:

- Activate the power window regulator one-touch up/down function. Refer to the ⇒ Owner's Manual.
- ◆ Check DTC memories of all control modules and delete the displayed entry "Undervoltage" using the ⇒ Vehicle diagnostic tester.

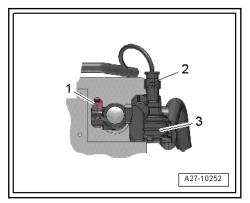


Note

After reconnecting the power supply, the ESP warning lamp can only go out after the vehicle has been driven a few meters.

Tightening Specifications

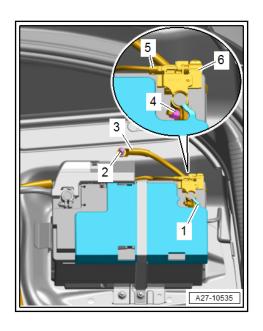
Refer to ⇒ -1.1 Battery", page 7





Ground Cable with Battery Monitoring 1.3 Control Module -J367-, Removing and Installing

Removing



- Switch off the ignition.
- Lift the luggage compartment floor covering by the handle and fold it forward.
- Remove the right insert for the vehicle tool kit.
- If equipped, open the cover -1- on the battery negative terminal.
- Loosen the nut -4- several turns and remove the battery ground cable terminal clamp from the battery terminal.
- Disconnect the connector -5-.
- Protected by copyright. Copyring for private or commercial purposes, in part or in whole, is not Remove!the nut = 2 and remove the ground cable 3-withpt any liability the Battery Monitoring Control Module 1367 6-Copyright by AUDI AG.

Installing

Install in the reverse order of removal while noting the following:

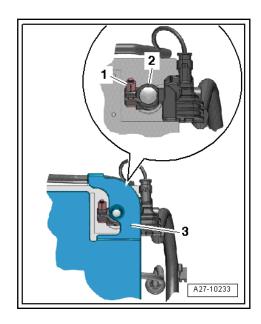
Connect the battery. Required actions. Refer to <u>⇒ page 10</u>.

Tightening Specifications

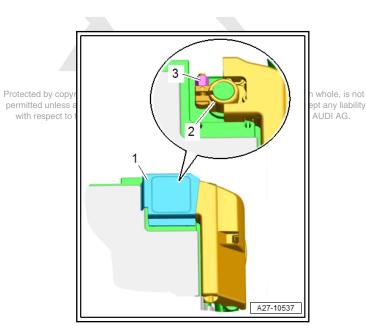
◆ Refer to ⇒ -1.1 Battery", page 7

1.4 Battery, Removing and Installing

Removing

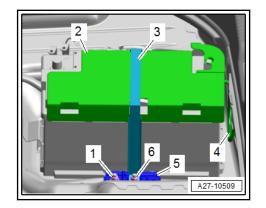


- Switch off the ignition.
- Lift the luggage compartment floor covering by the handle and fold it forward.
- If equipped, open the cover -3- on the battery negative termi-
- Loosen the nut -1- several turns and remove the battery ground cable clamp -2- from the battery terminal.
- Open the cover -1- over the battery positive terminal.



- Loosen the nut -3- several turns and remove the battery positive cable terminal clamp -2- from the battery terminal.
- Remove the nuts -1 and 6-.





- Disengage the retaining bracket -3- on the opposite side.
- Remove the battery bracket -5- upward.
- Equipped on some models: remove the battery cover -2-.
- Disconnect the central venting system hose -4-.
- Lift the battery up and out of the luggage compartment.



WARNING

There is a pollution risk.

♦ The disposal regulations for batteries and sulfuric acid must always be followed when disposing of batteries. Refer to ⇒ Electrical Equipment General Information; Rep. Gr. 27; Battery.

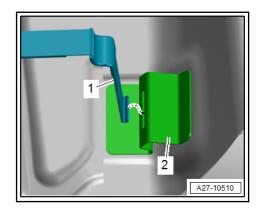
Installing



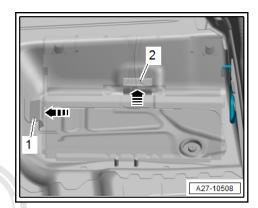
Note

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- Only maintenance-free batteries conforming to standards "TL82506" (from 12/1997) and "VW75073" (from 08/2001) may be installed.
- Batteries from the Audi Parts Program have a base strip adapter for conforming to different clamping strips. See the battery operating instructions for information on when and how to use the base strip adapter.
- Insert the battery and engage the retaining bracket -1- into the slot in the side bracket -2- in direction of -arrow-.



Push the battery up against the retaining brackets -1 and 2in direction of -arrows- so that the battery clamping strip engages in the retaining brackets.

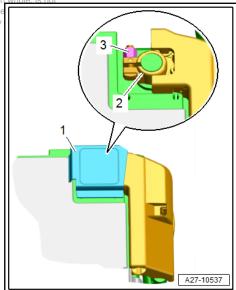


- The battery must not be able to move at all anymore.
- Attach the central venting system hose.

Install in reverse order of removal. Note the following:

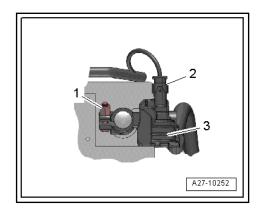
- When the ignition and electrical equipment are switched off, connect the battery in the following sequence:
- First connect the battery positive cable terminal clamp -2- to the battery positive terminal "+" by hand and tighten the nut -3-.

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- Close the cover -1- over the battery positive terminal.
- Disconnect the connector -2- from the Battery Monitoring Control Module -J367- -3-.





- Connect the battery ground cable clamp to the battery negative terminal "-" by hand and tighten the nut -1-.
- Reconnect the connector to the Battery Monitoring Control Module -J367-.
- Check the battery for secure fit after installation.
- If the battery was replaced, then the new battery must be adapted.

Procedure

- Connect the ⇒ Vehicle diagnostic tester.
- Select the Diagnostic mode and start the diagnosis.
- Select the Test plan tab.
- Select the Select individual test button and select the following tree structure consecutively:
- ♦ Body
- ♦ Electrical system
- ♦ 01 OBD-capable systems

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- ◆ 19 Data Bus On Board Diagnostic Interface rest533 the correctness of information in this document. Copyright by AUDI AG.
- ♦ 19 Data Bus On Board Diagnostic Interface, functions
- ♦ 19 Adapting
- ♦ 19 Adapt battery

When the battery is reconnected, the following steps must be performed:

- ♦ Activate the one-touch up/down function for the power window regulators. Refer to the ⇒ Owner's Manual.
- ◆ Check all the control module DTC memories and erase the displayed "undervoltage" entry using the ⇒ Vehicle Diagnostic Tester.



Note

After reconnecting the power supply, the ESP warning lamp can only go out after the vehicle has been driven a few meters.

Tightening Specifications

Refer to ⇒ -1.1 Battery", page 7

1.5 Battery, Charging

Procedure



WARNING

Risk of explosion due to discharged battery with "visual indicator".

If the "visual indicator" has no color or is light yellow, the battery may not be tested or charged. Do not give a jump start. There is a risk of explosion during testing, charging or jump starting. The battery must be replaced.

Before the battery charger can be connected, the following preliminary work is necessary:

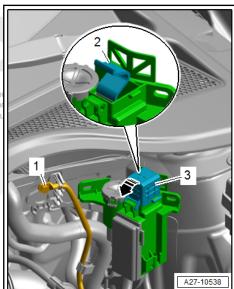


Note

It is recommended that the battery is charged when installed and connected. This is the only way to ensure the charge current is incorporated into the capacity calculation for the Battery Monitoring Control Module Battery Monitoring Control Module -J367-.

- Turn off the ignition and all electrical equipment.
- Open the cover -3- in direction of -arrow- over the positive terminal grip for the Battery Jump Start Terminal -U6- at the left rear of the engine compartment.

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- Connect the red charging clamp "+" of the battery charger to the positive terminal grip -2- and the black charging clamp "-" to the negative terminal grip -1-.
- Connect the battery charger electrical system connector and turn on the battery charger. Refer to ⇒ Electrical Equipment General Information; Rep. Gr. 27; Battery, Charging.

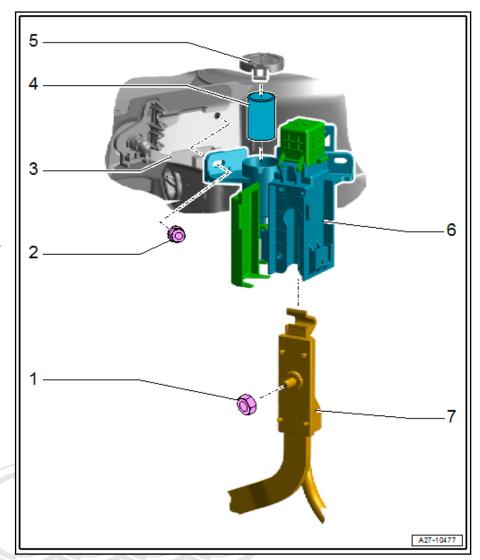


2 **Battery Jump Start Terminal**

- ⇒ -2.1 Battery Jump Start Terminal", page 17
- ⇒ J2.2 ump Start Terminal, Removing and Installing", page 18

2.1 Overview - Battery Jump Start Terminal

- 1 Nut
 - □ 15 Nm
- 2 Nut
 - □ 6 Nm
 - Quantity: 2
- 3 Body
- 4 Suppressor -C24-
 - □ Removing and Installing. Refer to ⇒ R1.3 emoving and Installing", page 232
- 5 Cap
- 6 Battery Jump Start Terminal -U6-
 - Removing and Installing. Refer to ⇒ J2.2 ump Start Termi-nal, Removing and Installing", page 18
- 7 Positive Cable
 - □ With positive terminal grip



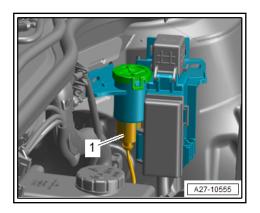


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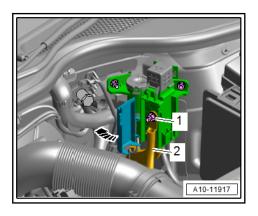


Battery Jump Start Terminal, Remov-2.2 ing and Installing

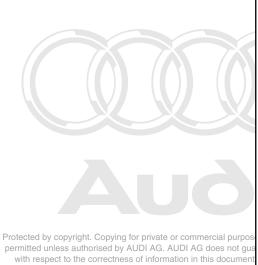
Removing

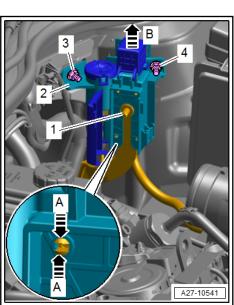


- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Connecting", page 9
- Disconnect the connector -1-.
- Open the cover -arrow-, remove the nut -1- and free up the terminal 30/B+ wire -2-.



Remove the nuts -3 and 4-.







- Remove the battery jump start terminal -2- from the threaded pins.
- Release the retainers in direction of -A arrows- and push the positive terminal grip -1- into the battery jump start terminal at the same time.
- Remove the battery jump start terminal upward from the positive terminal grip in direction of -arrow B-.

Installing

Install in reverse order of removal.

Tightening Specifications

Refer to
 ⇒ -2.1 Battery Jump Start Terminal", page 17



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3 Generator

- ⇒ -3.1 Generator", page 20
- ⇒ R3.2 emoving and Installing", page 21
- ⇒ C3.3 hecking", page 27

3.1 Overview - Generator

- ⇒ -3.1.1 Generator, without Bushings", page 20
- ⇒ -3.1.2 Generator, with Bushings", page 20

3.1.1 Overview - Generator, without Bushings

1 - Bolt

Steel Bolt

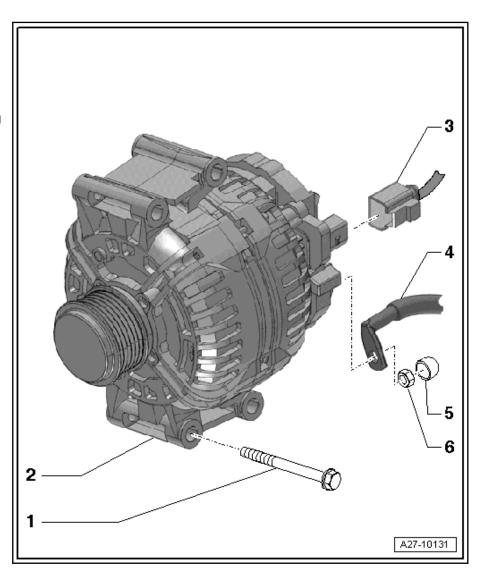
□ 23 Nm

Aluminum bolt

- □ Replace after removing
- □ 8 Nm +180°
- Quantity: 4
- ☐ There are different versions. Refer to the ⇒ Electronic Parts Catalog (ETKA).

2 - Generator

- Removing and Installing. Refer to ⇒ R3.2 emoving and Installing", page 21
- 3 Connector
- 4 30/B+ Terminal
- 5 Cap
- 6 Nut
 - □ 20 Nm



Overview - Generator, with Bushings 3.1.2

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1 - Generator

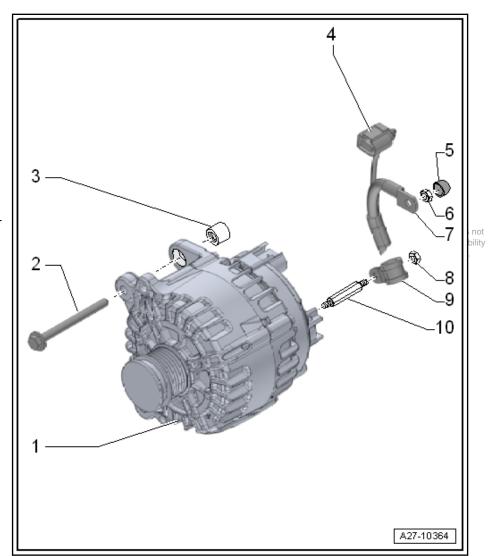
Removing and Installing. Refer to ⇒ R3.2 emoving and Installing", page 21

2 - Bolt

- □ 23 Nm
- Quantity: 2

3 - Bushing

- Because the clamping force of a tight bushing is too low despite the correct tightening specification, loosen the bushings
- Quantity: 2
- 4 Connector
- 5 Cap
- 6 Nut
 - □ 20 Nm
- 7 30/B+ Terminal
- 8 Nut
 - □ 3.2 Nm
- 9 Wire Clamp
- 10 Threaded Pin



3.2 Generator, Removing and Installing

⇒ R3.2.1 emoving and Installing, Vehicles with 2.0L TFSI Engine", page 21

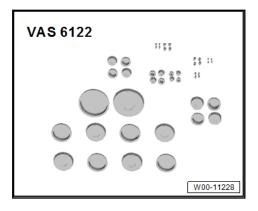
⇒ R3.2.2 emoving and Installing, Vehicles with 2.5L TFSI Engine", page 24

⇒ R3.2.3 emoving and Installing, Vehicles with 2.0L TDI Engine (Not for North American Market)", page 25

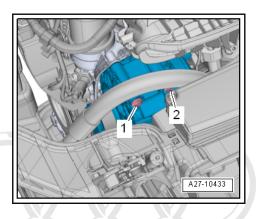
Generator, Removing and Installing, 3.2.1 Vehicles with 2.0L TFSI Engine

Special tools and workshop equipment required

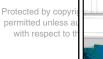
Engine Bung Set -VAS6122-

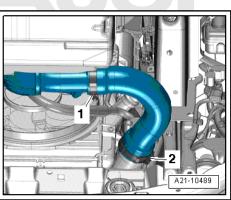


Removing



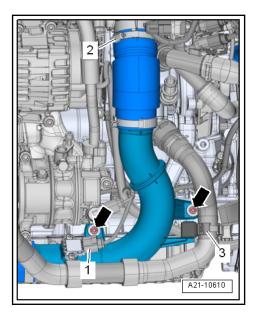
- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Connecting", page 9
- Remove the bolts -1 and 2-.
- Loosen the clamps -1 and 2- and remove the air duct hose.



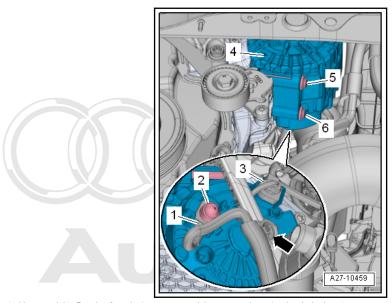


vhole, is not t any liability UDI AG.

- Seal the open lines and connections with clean plugs from the Engine Bung Set -VAS6122-.
- Vehicles with two fans: Remove the fan shroud. Refer to ⇒ Rep. Gr. 19; Radiator/Radiator Fan; Fan Shroud, Removing and Installing.
- Free up the coolant hose -3-.



- Loosen the hose clamp -2-.
- Remove the bolts -arrows-.
- Disconnect the connector -1-.
- Remove the right air duct pipe.
- Remove the A/C compressor from the bracket and lower it slightly. Refer to ⇒ Heating, Ventilation and Air Conditioning; Rep. Gr. 87; A/C Compressor; A/C Compressor, Removing and Installing at Bracket.
- Free up the wiring harness -arrow-.



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- Disconnect the connector -3-.
- Pry off the cap -2-.
- Remove the nut and remove the terminal 30/B+ -1-.
- Remove the generator downward to the right.

Installing

Install in the reverse order of removal while noting the following:

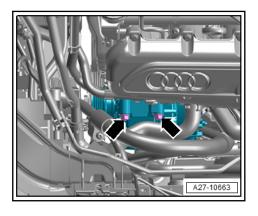
- Connect the battery. Required actions. Refer to ⇒ page 10.
- Start the engine and check the ribbed belt routing.

Tightening Specifications

◆ Refer to ⇒ -3.1 Generator", page 20

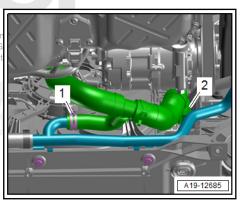
3.2.2 Generator, Removing and Installing, Vehicles with 2.5L TFSI Engine

Removing



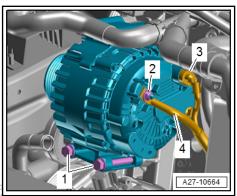
- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Connecting", page 9
- Remove the bolts -arrows-.
- Remove the A/C compressor. Refer to ⇒ Heating, Ventilation and Air Conditioning; Rep. Gr. 87; A/C Compressor; A/C Compressor, Removing and Installing.
- Remove the fan shroud. Refer to ⇒ Engine Mechanical; Rep. Gr. 19; Radiator/Radiator Fan; Fan Shroud, Removing and Installing.
- Lift the clamp -2- and remove the right lower coolant hose from the radiator.

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- Loosen the hose clamp -1- remove the coolant hose and move to the left side.
- Disconnect the connector -3-.





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- Remove the nut -2- and remove the 30/B+ terminal -4-.
- Remove the bolts -1-.
- Remove the generator downward.

Installing

Install in the reverse order of removal while noting the following:

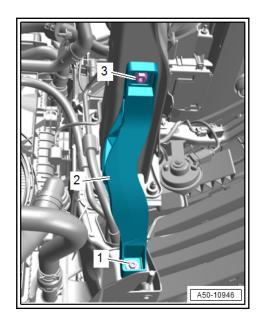
- Replace the aluminum bolts.
- Connect the battery. Required actions. Refer to ⇒ page 10.
- Start the engine and check the ribbed belt routing.

Tightening Specifications

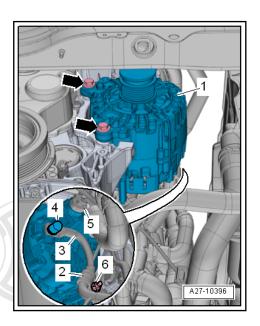
- ◆ Refer to ⇒ -3.1 Generator", page 20
- 3.2.3 Generator, Removing and Installing, Vehicles with 2.0L TDI Engine (Not for **North American Market)**

Removing

- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Connecting", page 9
- Remove the ribbed belt tensioner. Refer to ⇒ Rep. Gr. 13; Cylinder Block, Belt Pulley Side; Ribbed Belt Tensioner, Removing and Installing.
- Remove the fan shroud. Refer to ⇒ Rep. Gr. 19; Radiator/Radiator Fan; Fan Shroud, Removing and Installing.
- Remove the A/C compressor from the bracket and lower it slightly. Refer to ⇒ Heating, Ventilation and Air Conditioning; Rep. Gr. 87; A/C Compressor; A/C Compressor, Removing and Installing at Bracket.
- Remove the nut -3- and bolt -1-.



- Remove the brace -2-.
- Remove the bolts -arrows-.





Note

- If the generator is stuck in its bracket, tighten the bolts again up to two turns.
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not Carefully strike the bolt heads using the flat side of a ham authorised by AUDI AG. AUDI AG does not guarantee or accept any liability mer doing this loosens the sleeves of the generator mount. Correctness of information in this document. Copyright by AUDI AG.
- Remove the generator -1- from the mount with the wires connected.
- Disconnect the connector -5-.
- Pry off the cap -4-.
- Remove the nut and remove the terminal 30/B+ -item 3-.
- Remove the nut -6- and remove the wire clamp -2-.





Note

Depending on the version, the wire clamp may be clipped onto the generator.

Remove the generator downward to the right.



Caution

There is a risk of damaging the A/C compressor, the refrigerant lines and hoses.

Do not bend, twist or stretch the refrigerant lines and hoses.

Installing

Install in the reverse order of removal while noting the following:

 Drive the bolt bushings back slightly to make it easier to install the generator.



Note

Tight generator mount bushings must be loosened, otherwise the clamping force of the sleeve is too little despite the correct torque.

- Connect the battery. Required actions. Refer to <u>⇒ page 10</u>.
- Start the engine and check the belt routing.

Tightening Specifications

◆ Refer to ⇒ -3.1.2 Generator, with Bushings", page 20

3.3 Generator, Checking

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4 Starter

- ⇒ -4.1 Starter", page 28
- ⇒ R4.2 emoving and Installing", page 30

4.1 Overview - Starter

- ⇒ -4.1.1 Starter, Vehicles with Manual Transmission", page 28

⇒ -4.1.2 Starter, Vehicles with Dual-Clutch Transmission Version 1", page 28 Protected by copyright. Copying for private or commercial purpo Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability

⇒ -4.1.3 Starter, Vehicles with Dual-Glutch Transmission Verent. Copyright by AUDI AG. sion 2", page 29

4.1.1 Overview - Starter, Vehicles with Manual Transmission

1 - Starter

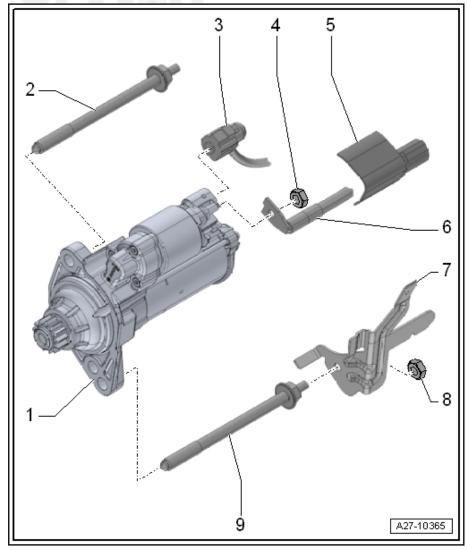
Removing and Installing. Refer to ⇒ R4.2 emoving and Installing", page 30

2 - Bolt

- ☐ Tightening specification:
- Bolted connection for starter to engine/transmission flange. Řefer to ⇒ Transmission; Rep. Gr. 34; Transmission, Removing and Installing; Transmission Tightening Specifications.

3 - Connector

- 4 Nut
 - □ 20 Nm
- 5 Cap
- 6 30/B+ Terminal
- 7 Bracket
 - □ For wiring harness
- 8 Nut
 - □ 20 Nm
- 9 Bolt
 - ☐ Tightening specification:
- Bolted connection for starter to engine/transmission flange. Řefer to ⇒ Transmission; Rep. Gr. 34;



Transmission, Removing and Installing; Transmission Tightening Specifications.

4.1.2 Overview - Starter, Vehicles with Dual-Clutch Transmission Version 1

1 - Starter

□ Removing and Installing. Refer to ⇒ R4.2 emoving and Installing", page 30

2 - Bolt

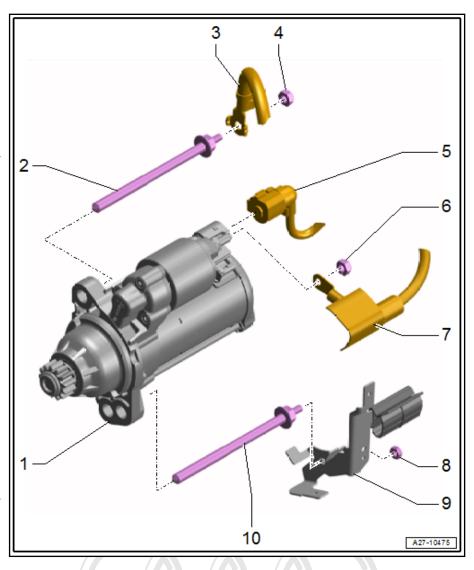
- ☐ Tightening specification:
- Bolted connection for starter to transmission: 40 Nm
- 3 Ground Wire
- 4 Nut
 - □ 20 Nm
- 5 Connector
- 6 Nut
 - □ 20 Nm

7 - 30/B+ Terminal

- with cap
- 8 Nut
 - □ 20 Nm
- 9 Bracket
 - For wiring harness

10 - Bolt

- ☐ Tightening specification:
- Bolted connection for starter to transmission: 40 Nm
 - Depending on the version, installed on top or bottom



4.1.3 Overview - Starter, Vehicles with Dual-Clutch Transmission Version 2



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1 - Starter

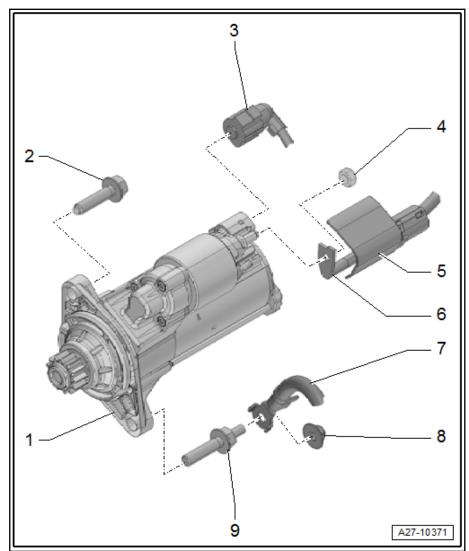
Removing and Installing. Refer to ⇒
 R4.2 emoving and Installing", page 30.

2 - Bolt

- ☐ Tightening Specification
- M10 threaded connection -40 Nm
- M12 threaded connection -80 Nm
 - ☐ There are different versions. Refer to the
 ⇒ Electronic Parts Catalog (ETKA).
- 3 Connector
- 4 Nut
 - □ 15 Nm
- 5 Cap
- 6 30/B+ Terminal
- 7 Ground Wire
- 8 Nut
 - □ 20 Nm

9 - Bolt

- ☐ Tightening Specification
- M10 threaded connection -40 Nm
- M12 threaded connection -80 Nm
 - ☐ There are different versions. Refer to the ⇒ Electronic Parts Catalog (ETKA).



4.2 Starter, Removing and Installing

⇒ R4.2.1 emoving and Installing, Vehicles with 2.0L TFSI Engine/2.0L TDI Engine and Manual Transmission (Not for North American Market)", page 30

⇒ R4.2.2 emoving and Installing, Vehicles with 2.0L TFSI Engine and Dual Clutch Transmission", page 32

⇒ R4.2.3 emoving and Installing, Vehicles with 2.5L TFSI Engine with Dual-Clutch Transmission", page 33

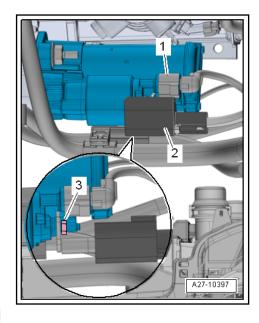
4.2.1 Starter, Removing and Installing, Vehicles with 2.0L TFSI Engine/2.0L TDI Engine and Manual Transmission (Not for North American Market)

Removing

Disconnect the ground cable from the battery when the ignition is switched off. Refer to
 ⇒ D1.2 isconnecting and Connecting", page 9.



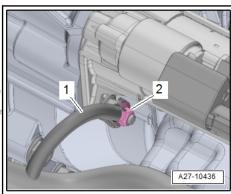
- Remove the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing or ⇒ Engine Mechanical; Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Disconnect the connector -1- by sliding the retainer toward the rear and pressing the release down.



- Pry up the cap -2-.
- Remove the terminal-30/B+ wire -3- from the starter.
- Remove the nut -2-.



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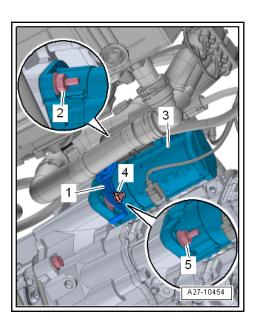
- Remove the ground cable -1-.



Note

Depending on the version, the ground cable can also be installed on the upper bolt.

Remove the nut -4- and remove the bracket -1- for the wires. The wires remain connected.



Remove the bolts -2 and 5- and then remove the starter -3upward.

Installing

Install in the reverse order of removal while noting the following:

Connect the battery. Required actions. Refer to <u>⇒ page 10</u>.

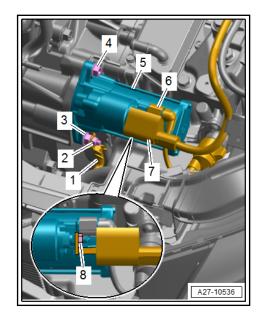
Tightening Specifications

- ◆ Refer to ⇒ -4.1 Starter", page 28
- Starter, Removing and Installing, Vehi-4.2.2 cles with 2.0L TFSI Engine and Dual **Clutch Transmission**

Removing

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- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Con-
- Remove the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Remove the cap -7-.



- Remove the nut -8- and remove the terminal 30/B+ wire.
- Disconnect the connector -6- by sliding the retainer back and pressing the release down.
- Remove the lower nut -2- and remove the ground wire -1-.
- Remove the bolts -3 and 4- and remove the starter -5- upward.

Installing

Install in the reverse order of removal while noting the following:

Connect the battery. Required actions. Refer to ⇒ page 10.

Tightening Specifications

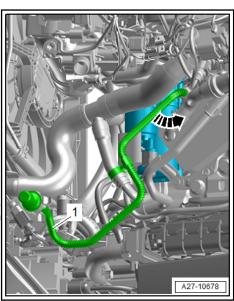
- ♦ Refer to ⇒ -4.1 Starter", page 28
- 4.2.3 Starter, Removing and Installing, Vehicles with 2.5L TFSI Engine with Dual-**Clutch Transmission**

Removing

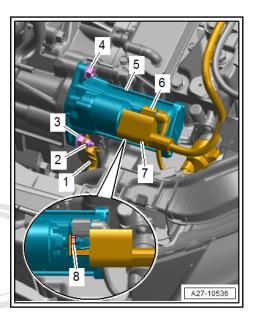


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- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Connecting", page 9
- Remove the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Free up the transmission ventilation hose -1- and pivot to the side in direction of -arrow-.
- Disconnect the connector -6- by sliding the retainer back and pressing the release down.



- Remove the cap -7-.
- Remove the nut -8- and remove the terminal 30/B+ wire.
- Remove the bolt -4-.
- Remove the nut -2- and free up the ground wire -1-.
- Remove the double by copyright. Copying for private or commercial purposes, in part or in whole, is not provided by AUDI AG. AUDI AG does not guarantee or accept any liability
- Remove the starter -5- upward between the coolant hoses.

Installing

Install in the reverse order of removal while noting the following:

Connect the battery. Required actions. Refer to <u>⇒ page 10</u>.

Tightening Specifications

Refer to ⇒ -4.1 Starter", page 28



Start/Stop System 5

⇒ L5.1 ocation Overview - Start/Stop System", page 35

5.1 Component Location Overview - Start/Stop System



Note

Pay attention to the safety precautions. Refer to ⇒ P1.1 recautions when Working on Vehicles with Start/Stop System", page 1.

1 - Vehicle Electrical System Control Module -J519-

Overview. Refer to ⇒ L2.1 ocation Overview -Control Modules", page 242.

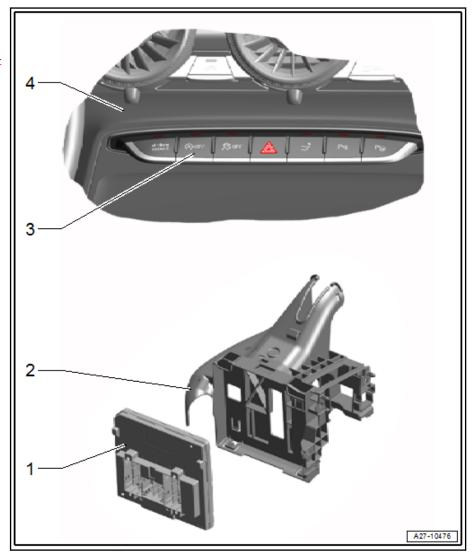
2 - Bracket

☐ For vehicle electrical system control module

3 - Start/Stop Mode Button - E693-

Removing and Installing. Refer to ⇒ i2.7 n Instrument Panel, Removing and Installing", page 188 .

4 - Instrument Panel



Instruments

Instrument Cluster

⇒ -1.1 Instrument Cluster", page 36

⇒ C1.2 luster with Instrument Cluster Control ModuleJ285, Removing and Installing", page 38

1.1 **Overview - Instrument Cluster**



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1 - Outside Air Temperature Sensor -G17-

Removing and Installing. Refer to ⇒ Heating, Ventilation and Air Conditioning; Rep. Gr. 80; Additional Components for Control and Regulation: Outside Air Temperature Sensor -G17-, Removing and Installing

2 - Oil Level Thermal Sensor -G266-

Overview. Refer to ⇒ Rep. Gr. 17; Oil Pan/Oil Pump; Overview - Oil Pan/Oil Pump.

3 - Engine Coolant Temperature Sensor

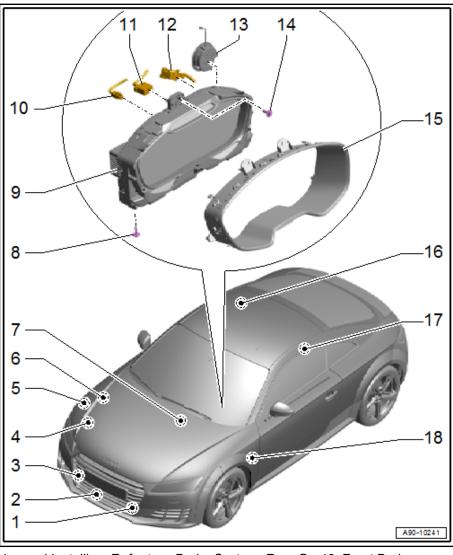
Allocation and Overview. Refer to \Rightarrow Rep. Gr. 19; Coolant Pump/ Thermostat.

4 - Oil Pressure Switch

Allocation and Overview. Refer to \Rightarrow Rep. Gr. 17; Oil Filter/Oil Pressure Switch.

5 - Right Front Brake Pad Wear Sensor -G35-

Integrated in the brake pad. Cannot be replaced separately if faulty.



Front Brake Pads, Removing and Installing. Refer to ⇒ Brake System; Rep. Gr. 46; Front Brakes; Brake Pads, Removing and Installing.

6 - Engine Coolant Level Warning Switch -F66-

7 - Brake Fluid Level Warning Switch -F34-

- ☐ Integrated in the brake fluid reservoir Cannot be replaced separately if faulty.
- Brake Fluid Reservoir, Removing and Installing. Refer to ⇒ Brake System; Rep. Gr. 47; Brake Booster/Master Brake Cylinder; Brake Fluid Reservoir, Removing and Installing.

8 - Bolt

- □ 2.5 Nm
- Quantity: 2

9 - Instrument Cluster

- ☐ With Instrument Cluster Control Module -J285-
- Do not disassemble
- ☐ The instrument cluster must be replaced if there is a malfunction.
- Removing and Installing. Refer to ⇒ C1.2 luster with Instrument Cluster Control ModuleJ285, Removing and Installing", page 38.

10 - Antenna Wire

11 - Fiber-Optic Cable Connector

□ Seal with Fiber-Optic Repair Set - Connector Protective Caps -VAS6223/9-

- For the instrument cluster
- ☐ Multi-pin connector pin assignment. Refer to ⇒ Wiring diagrams, Troubleshooting & Component loca-

13 - Speaker

- For the instrument cluster
- Not available separately.

14 - Bolt

□ 2.5 Nm

15 - Instrument Cluster Trim

□ Removing and Installing. Refer to ⇒ Body Interior; Rep. Gr. 70; Instrument Panel; Instrument Cluster Trim, Removing and Installing.

16 - Fuel Level Sensor -G-

□ Overview. Refer to ⇒ Rep. Gr. 20; Fuel Delivery Unit/Fuel Level Sensor; Overview - Fuel Delivery Unit/Fuel Level Sensor.

17 - Fuel Level Sensor 2 -G169-

- Only vehicles with quattro drive
- ☐ Overview. Refer to ⇒ Rep. Gr. 20; Fuel Delivery Unit/Fuel Level Sensor; Overview Fuel Delivery Unit/Fuel Level Sensor.

18 - Windshield Washer Fluid Level Sensor -G33-

- Depending on vehicle equipment, it is integrated in the washer fluid reservoir or can replaced separately
- Washer Fluid Reservoir, Removing and Installing. Refer to ⇒ F2.2 luid Reservoir, Removing and Installing", page 62
- □ Windshield Washer Fluid Level Sensor -G33-, Removing and Installing. Refer to ⇒ W2.3 asher Fluid Level Sensor, Removing and Installing", page 63.

1.2 **Instrument Cluster with Instrument** Cluster Control Module C-J285 THI Remove in whole, is not

ing and installing of information in this document. Copyright by AUDI AG.

Special tools and workshop equipment required

Fiber-Optic Repair Set - Connector Protective Caps -VAS6223/9- from Fiber-Optic Repair Set -VAS6223B-





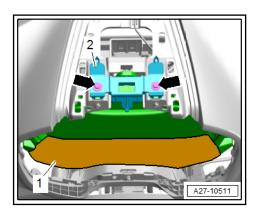
Note

If replacing the control module (instrument cluster), select the "Replace control module" function for the respective control module using the ⇒ Vehicle diagnostic tester.

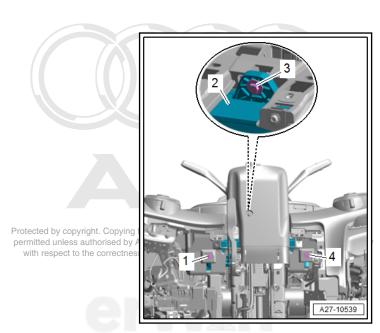


Removing

- Move the steering wheel as far to the rear and down as possible. Use the full steering column adjustment range for
- Switch off the ignition and place the ignition key outside of the vehicle.
- Remove the upper steering column trim panel. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments/Covers; Upper Steering Column Trim Panel, Removing and Installing.
- Remove the instrument cluster trim. Refer to ⇒ Body Interior; Rep. Gr. 70; Instrument Panel; Instrument Cluster Trim, Removing and Installing.
- Remove the driver side instrument panel cover. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Driver Side Instrument Panel Cover, Removing and Installing.
- Remove the bolts -arrows- and remove the instrument panel reinforcement -2-.

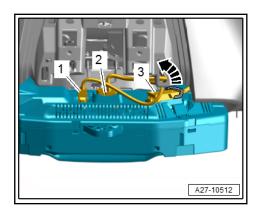


- Tape off the instrument cluster at the bottom -1- as shown to protect it from getting damaged.
- Remove the bolts -1, 3 and 4-.

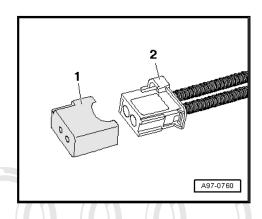


- Pivot the instrument cluster -2- toward the rear.
- Disconnect the connectors:





- For the antenna
- For the fiber-optic cable
- Disconnect the connector by pressing the tab -3-, turning the retaining bracket in the direction of -arrow- and disconnecting the connector.
- Seal the open wiring harness connector -2- of the fiber-optic cable with the Fiber-Optic Repair Set - Connector Protective Caps - VAS6223/9- -item 1-.





Note

The protective cap prevents contamination of or mechanical damage to the front surface of the fiber-optic cable which would impair light transmission.

Remove the instrument cluster on the front passenger side between the steering wheel and the instrument panel.

Installing

Install in reverse order of removal.

Tightening Specifications

Refer to ⇒ -1.1 Instrument Cluster", page 36

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2 Horn

⇒ -2.1 Horn", page 41

⇒ T2.2 one HornH2/Low Tone HornH7, Removing and Installing", page 42

2.1 Overview - Horn

1 - Nut

☐ 14 Nm

2 - Low Tone Horn -H7-

☐ Removing and Installing. Refer to ⇒ T2.2.1 one HornH2/Low Tone HornH7, Removing and Installing, Vehicles without Auxiliary Radiator", page 42.

3 - Bracket

For the right horn

4 - Bolt

□ 8 Nm

5 - Bolt

□ 8 Nm

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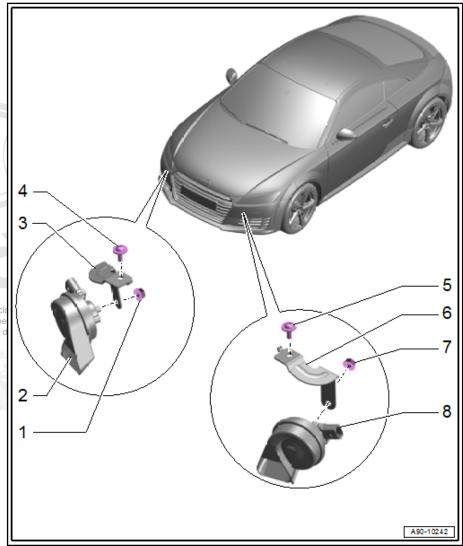
7 - Nut

☐ 14 Nm

8 - High Tone Horn -H2-

☐ Removing and Installing. Refer to

⇒ T2.2.1 one
HornH2/Low Tone
HornH7, Removing and Installing, Vehicles without Auxiliary Radia-tor", page 42



2.2 High Tone Horn -H2-/Low Tone Horn -H7-, Removing and Installing

⇒ T2.2.1 one HornH2/Low Tone HornH7, Removing and Installing, Vehicles without Auxiliary Radiator", page 42

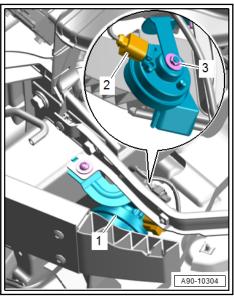
⇒ T2.2.2 one HornH2/Low Tone HornH7, Removing and Installing, Vehicles with Auxiliary Radiator", page 42

⇒ B2.2.3 racket, Removing and Installing", page 43

2.2.1 High Tone Horn -H2-/Low Tone Horn -H7-, Removing and Installing, Vehicles without Auxiliary Radiator

Removing

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- Remove the front wheel spoiler. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview - Front Wheel Housing Liner.
- Disconnect the connector -2-.
- Remove the nut -3- and remove the horn -1-.

Installing

Install in reverse order of removal.

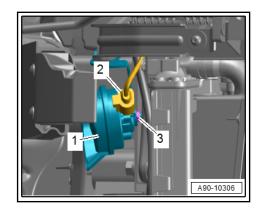
Tightening Specifications

- ♦ Refer to ⇒ -2.1 Horn", page 41
- 2.2.2 High Tone Horn -H2-/Low Tone Horn -H7-, Removing and Installing, Vehicles with Auxiliary Radiator

Removing

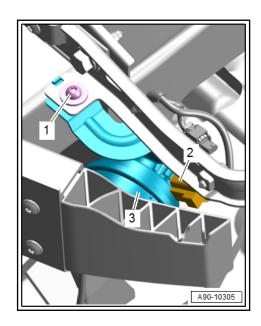
- Remove the front bumper cover. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Bumper Cover, Removing and Installing.
- Remove the auxiliary radiator air duct by pushing the air duct outward and removing it.
- Remove the nut -3- and remove the horn -1-.





- Disconnect the connector -2-.

2.2.3 Horn Bracket, Removing and Installing Removing



- Remove the front bumper cover. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Bumper Cover, Removing and Installing.
- Vehicles with auxiliary radiator: Remove the auxiliary radiator air duct by pushing the air duct outward and removing it.
- Disconnect the connector -2- and free it up.
- Remove the bolt -1-.
- Remove the horn -3- with the bracket.

Installing

Install in reverse order of removal purposes, in part or in whole, is not permitted unless authorized by AUDI AG. AUDI AG does not guarantee or accept any liability Tightening Specifications information in this document. Copyright by AUDI AG.

♦ Refer to <u>⇒ -2.1 Horn", page 41</u>



Wiper/Washer Systems

Windshield Wiper System

- ⇒ -1.1 Windshield Wiper System", page 44
- ⇒ W1.2 iper, Bringing into Service Position", page 47
- ⇒ B1.3 lade, Removing and Installing", page 48
- ⇒ W1.4 iper Arms, Removing and Installing", page 49
- ⇒ W1.5 iper Arms, Adjusting", page 51
- ⇒ W1.6 iper MotorV, Removing and Installing", page 52
- ⇒ R1.7 ecognition Sensor, Removing and Installing", page 53

1.1 Overview - Windshield Wiper System

- ⇒ -1.1.1 Windshield Wiper System", page 44
- ⇒ -1.1.2 Windshield Wiper System, Rain/Light Recognition Sensor", page 46

1.1.1 Overview - Windshield Wiper System

The overview shows a LHDitvehicle as an example. For RHDs not guarantee or accept any liability is document. Copyright by AUDI AG. vehicles the layout is a mirror image.

1 - Bolt

Tightening sequence. Refer to ⇒ Fig. ""Windshield Wiper Motor Tightening Specification and Sequence"", page 46.

2 - Windshield Wiper Motor -

- With the Wiper Motor Control Module -J400-
- Removing and Installing. Refer to ⇒ W1.6 iper MotorV, Removing and Installing", <u>page 52</u>.

3 - Bolt

□ Tightening sequence. Refer to ⇒ Fig. ""Wind-shield Wiper Motor Tightening Specification and Sequence"", <u>page 46</u> .

4 - Nut

□ 21 Nm

5 - Cap

6 - Front Passenger Side Windshield Wiper Arm

- There are different lengths. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- Removing and Installing. Refer to ⇒ W1.4 iper Arms, Removing and Installing", page 49
- Adjusting. Refer to ⇒ W1.5 iper Arms, Adjusting", page 51.

7 - Front Passenger Side Wiper Blade

- □ There are different lengths. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- Replacing. Refer to ⇒ B1.3 lade, Removing and Installing", page 48.

8 - Driver Side Wiper Blade

- □ There are different lengths. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- □ Replacing. Refer to ⇒ B1.3 lade, Removing and Installing", page 48.

9 - Driver Side Windshield Wiper Arm

- ☐ There are different lengths. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- Removing and Installing. Refer to ⇒ W1.4 iper Arms, Removing and Installing", page 49.
- ☐ Adjusting. Refer to <u>⇒ W1.5 iper Arms, Adjusting</u>", page 51.

10 - Cap

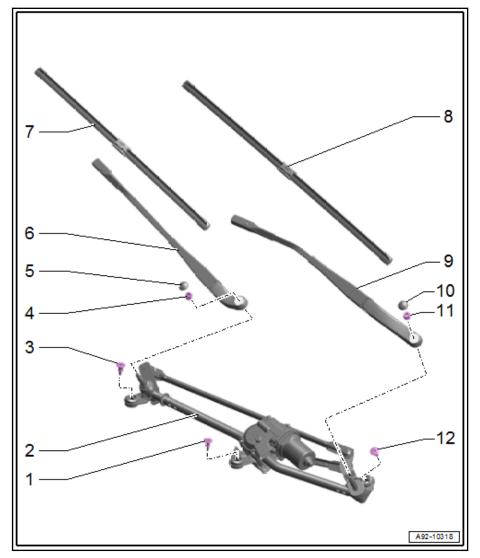
11 - Nut

□ 21 Nm

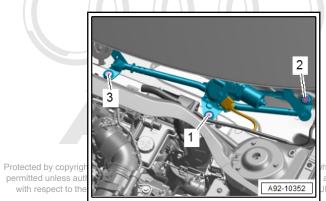
12 - Bolt

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☐ Tightening sequence. Refer to ⇒ Fig. ""Windshield Wiper Motor" Tightening Specification and Sequence"", page 46



Windshield Wiper Motor - Tightening Specification and Sequence



nole, is not any liability JDI AG.

Tighten the bolts according to the steps in the specified sequence:

Step	Tightening Sequence	Tightening Specification
1.	-1, 3, 2-	Install all the way by hand
2.	-1, 3, 2-	8 Nm + 45°

1.1.2 Overview - Windshield Wiper System, Rain/Light Recognition Sensor



1 - Silicone Pad

□ Replace after removing

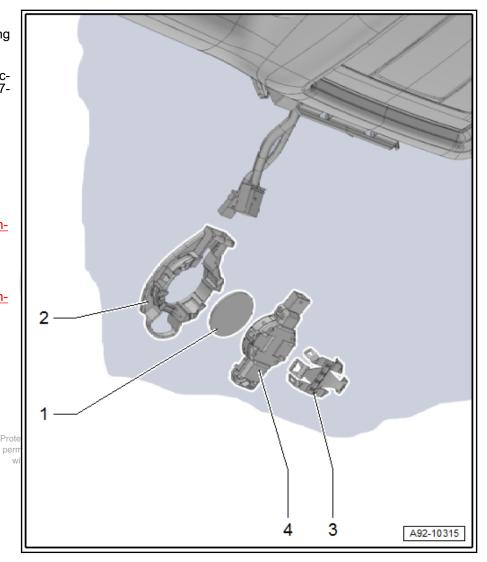
2 - Retaining Plate

- ☐ For the Rain/Light Recognition Sensor -G397-
- Attached to the windshield

3 - Clip

4 - Rain/Light Recognition Sensor -G397-

- Removing and Installing. Refer to R1.7.1 ecognition SensorG397, Removing and Installing", page 53
- ☐ Replacing. Refer to ⇒ R1.7.2 ecognition SensorG397, Replacing", <u>page 57</u>



Windshield Wiper, Bringing into Serv-1.2 ice Position



Note

If the windshield wiper motor is to be run during the procedure, the front lid must be completely closed, otherwise the power supply to the wiper motor will be interrupted.

- Make sure the wiper blades are not frozen if there is a risk for frost.
- Briefly turn the ignition on and then off again.
- Operate the "one-touch wiping" within 10 seconds.
- The windshield wipers run in the "service position".



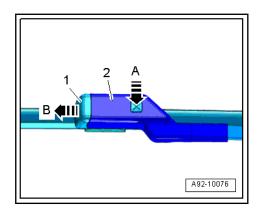
Caution

Risk of damaging the front lid by moving the windshield wipers back to the basic setting.

- Do not drive a vehicle with windshield wiper arms folded
- The windshield wipers automatically go back in the basic setting when the windshield wiper switch is activated or when driving faster than 6 km/h (3.7 mph).

1.3 Wiper Blade, Removing and Installing

Removing



- Bring the windshield wiper into the service position. Refer to ⇒ W1.2 iper, Bringing into Service Position", page 47
- Lift the windshield wiper arm off the windshield.
- Press the clip in direction of -arrow A- and slide the wiper blade -1- off of the windshield wiper arm -2- in direction of -arrow B-.
- Remove the wiper blade.

Installing



Caution

There is a risk of damaging the body.

The driver and front passenger side wiper blades are different lengths.

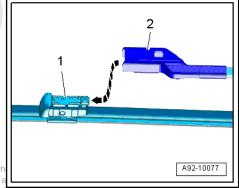
Install in the reverse order of removal while noting the following:

Guide the wiper blade -1- parallel into the windshield wiper arm -2- in direction of -arrow-. Make sure that the wiper blade is slid into the windshield wiper arm until the clip audi-or accept any liability bly engages. with respect to the correctness of information in this document. Copyright by AUDI AG.









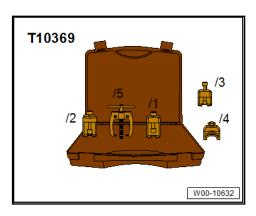
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To leave the "Service position", either press the windshield wiper switch or drive faster than 6 km/h (3.7 mph).

1.4 Windshield Wiper Arms, Removing and Installing

Special tools and workshop equipment required

◆ Puller - Wiper Arm Kit -T10369-



Removing



Caution

There is a risk of damaging the windshield wiper axles.

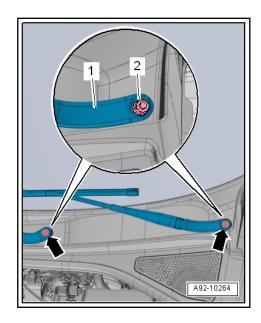
The windshield wiper axles can get damaged when removing the windshield wiper arms without using the Puller - Wiper Arm Kit - Puller 1 -T10369/1-.



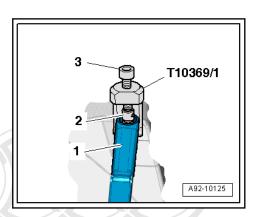
Note

If the windshield wiper motor is to be run during the work procedure, the front lid must be closed. Otherwise, the power supply to the wiper motor will be interrupted.

Pry the caps -arrows- off of the windshield wiper arms -1with a screwdriver.



- Loosen the nuts -2- several turns.
- Position the Puller Wiper Arm Kit Puller 1 -T10369/1- on the windshield wiper arm -1- as shown.



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- Position the thrust piece -2- on the windshield wiper axle.
- Turn the bolt -3- clockwise until the windshield wiper arm is removed from the windshield wiper axle.
- Remove the nuts completely and remove the windshield wiper arms.

permitted unless auth with respect to the

Installing



Caution

There is a risk of damaging the body.

The windshield wiper arms on the driver and front passenger sides are different lengths.

Install in the reverse order of removal while noting the following:

Arms, Adjusting", page 51



1.5 Windshield Wiper Arms, Adjusting

Procedure



Note

If the windshield wiper motor is to be run during the work procedure, the front lid must be closed. Otherwise, the power supply to the wiper motor will be interrupted.

- Remove the windshield wiper arms. Refer to <u>⇒ W1.4 iper</u> Arms, Removing and Installing", page 49
- Switch the ignition on.
- Activate "one-touch wiping" and let the windshield wiper motor run into its end position.

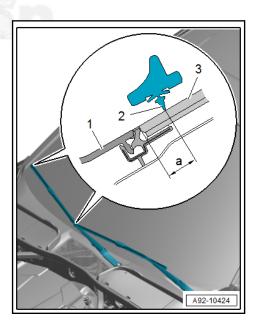


Note

- Every second time the windshield wiper motor is switched off, it returns to a lower rest position, which ensures that the lip of the wiper blade is turned in the opposite direction.
- To do so, the windshield wiper motor moves downward past the end position and then goes back up again slightly. This lower rest position must not be used to align the windshield wiper crank.
- Only use the end position where the windshield wiper motor runs directly into the end position with no under-stroke. If necessary, activate "one-touch wiping" again copying for private or commercial purposes, in part or in whole, is not

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- Switch off the ignition.
- Position the wiper arm with wiper blade installed at the wiper

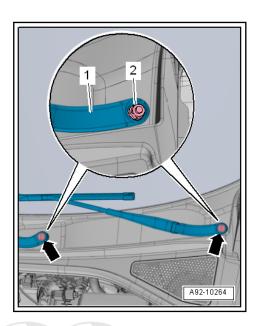


Align the wiper blade tip -2- on the lower edge of the windshield -3- to the plenum chamber cover -1-:

Side	Adjustment Dimension -a- in mm
Driver side	20 +10

Side	Adjustment Dimension -a- in mm
Front passenger side	18 ⁺¹⁰

Tighten the nuts -2- for the windshield wiper arms -1-.



- Switch the ignition on.
- Activate "one-touch wiping" and let the windshield wiper arms run into their end position.
- Switch off the ignition.
- Check the wiper arm adjustment one more time and adjust if necessary.
- Press the caps -arrows- onto the windshield wiper arms.

Tightening Specifications

◆ Refer to ⇒ -1.1.1 Windshield Wiper System", page 44

Windshield Wiper Motor -V-, Removing 1.6 ate or commercial purposes, in part or in whole, is not and Installing permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

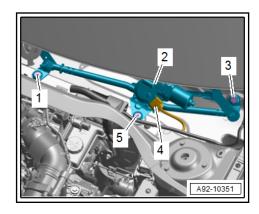


Note

If replacing the control module, select the "Replace control module" function for the corresponding control module on the ⇒ Vehicle diagnostic tester.



Removing



- Remove the windshield wiper arms. Refer to ⇒ W1.4 iper <u>Arms, Removing and Installing", page 49</u> .
- Remove the plenum chamber cover. Refer to ⇒ Body Exterior; Rep. Gr. 50; Bulkhead; Plenum Chamber Cover, Removing and Installing.
- Remove the bolts -1, 3 and 5-.
- Remove the windshield wiper frame -2- with the linkage and remove the windshield wiper motor from the plenum cham-
- Disconnect the connector -4-.

Installing

Install in the reverse order of removal while noting the following:

- Insert the windshield wiper motor with the windshield wiper frame into the vehicle.
- Tighten the bolts. Refer to ⇒ Fig. ""Windshield Wiper Motor -<u>Tightening Specification and Sequence"", page 46</u>.
- Adjust the windshield wiper arms. Refer to ⇒ W1.5 iper Arms, Adjusting", page 51

Tightening Specifications

Refer to ⇒ Fig. ""Windshield Wiper Motor - Tightening Specification and Section by copyright or private or commercial purposes, in part or in whole, is not fication and Section by Copyright of private or commercial purposes, in part or in whole, is not fication and Section by Copyright Old AG. AUDI AG does not guarantee or accept any liability Copyright by AUDI AG.

1.7 Rain/Light Recognition Sensor, Removing and Installing

⇒ R1.7.1 ecognition SensorG397, Removing and Installing",

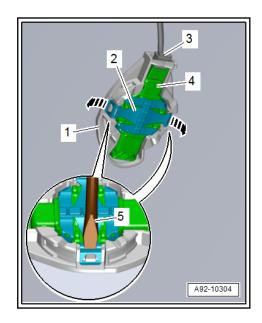
⇒ R1.7.2 ecognition SensorG397, Replacing", page 57

1.7.1 Rain/Light Recognition Sensor -G397-, Removing and Installing

Special tools and workshop equipment required

♦ Cleaning Solution -D 009 401 04-

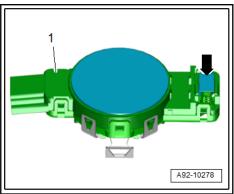
Removing



- Switch off the ignition and place the ignition key outside of the vehicle.
- Remove the interior rearview mirror. Refer to ⇒ Body Interior; Rep. Gr. 68; Interior Rearview Mirror; Interior Rearview Mirror, Removing and Installing.
- Disconnect the connector -3-.
- Insert a narrow screwdriver -5- into the opening as shown and release the retainers on the spring -2- in direction of -arrows-.
- Wait one minute so that the silicone pad can be removed without leaving any residue.
- Loosen the Rain/Light Recognition Sensor -G397- -4- by moving it back and forth and remove it from the mount -1-.



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Caution

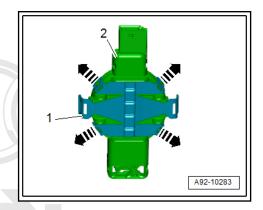
Risk of damaging the humidity sensor.

- ◆ The humidity sensor is very sensitive and must not be damaged.
- If the humidity sensor -arrow- is damaged, then the rain/light recognition sensor -1- must be replaced.



- Clean the adhesive surface on the windshield with Cleaning Solution -D 009 401 04-.
- Any silicone residue must be completely removed.

Installing



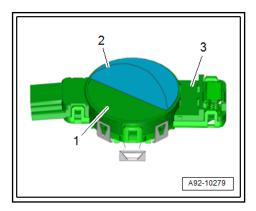
Install in the reverse order of removal while noting the following:



Note

Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Replace the silicone pad and spring. With respect to the correctness of information in this document. Copyright by AUDI AG.

- Release the retainers on the old spring -1- in direction of -arrows- and remove it from the sensor -2-.
- Press on the new spring until it audibly engages.
- Remove the silicone pad -2- from the sensor -3- without leaving any residue.



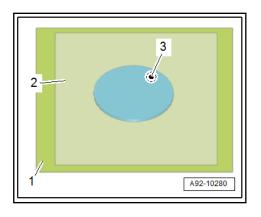
- Clean the adhesive surface -1- on the sensors with a lintfree towel.
- Remove the silicone paper -1- from the silicone pad -3-.

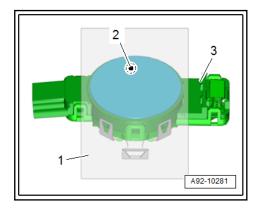


- The clear protective film -2- remains on the silicone pad as an assembly aid.
- Center the silicone pad -2- on the sensor -3- using the clear protective film -1-.

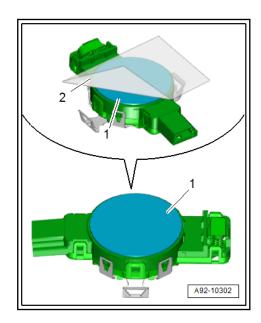
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- Press the silicone pad through the protective film onto the sensor without forming any bubbles.
- Remove the protective film -2- from the silicone pad -1-.



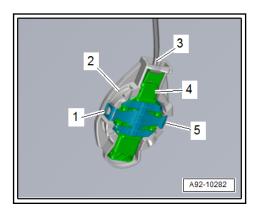


Note

To avoid contaminating the silicone pad, remove the protective film just before installing it.



- Coat the entire surface of the silicone pad with Cleaning Solution -D 009 401 04-.
- Insert the sensor -4- into the mount -2-.



Caution

The Rain/Light Recognition Sensor -G397- must not have any embedded objects or bubbles between it and the windshield so that it functions correctly.

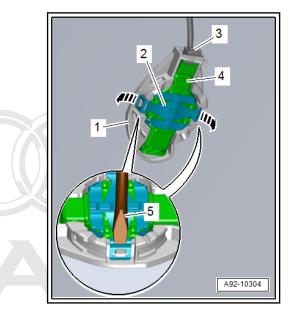
- Press on the clips -1 and 5- until they audibly engage.
- Connect the connector -3-.

1.7.2 Rain/Light Recognition Sensor -G397-, Replacing

Special tools and workshop equipment required

♦ Cleaning Solution -D 009 401 04-

Removing



- Switch off the ignition and place the ignition ke proteins it coveright. Copying for private or commercial purposes, in part or in whole, is not the web ignition and place the ignition key proteins it covers the proteins authorised by AUDI AG. AUDI AG does not guarantee or accept any liability the vehicle. with respect to the correctness of information in this document. Copyright by AUDI AG.
- Remove the interior rearview mirror. Refer to ⇒ Body Interior; Rep. Gr. 68; Interior Rearview Mirror; Interior Rearview Mirror, Removing and Installing.

- Disconnect the connector -3-.
- Insert a narrow screwdriver -5- into the opening as shown and release the retainers on the spring -2- in direction of -arrows-.
- Wait one minute so that the silicone pad can be removed without leaving any residue.
- Loosen the Rain/Light Recognition Sensor -G397- -4- by moving it back and forth and remove it from the mount -1-.
- Clean the adhesive surface on the windshield with Cleaning Solution -D 009 401 04-.
- Any silicone residue must be completely removed.

Installing

Install in the reverse order of removal while noting the following:



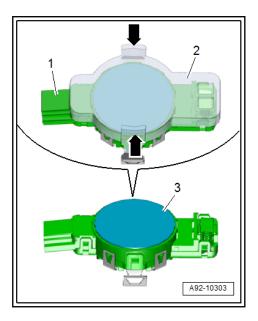
Caution

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art or in whole, is not or accept any liability right by AUDI AG.

The humidity sensor is very sensitive and must not be damaged.

Gently press the grip surfaces -arrows- on the protective cap -2- together and remove from the sensor -1-.

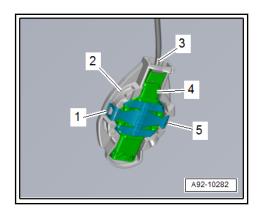




Note

To avoid contaminating the silicone pad, remove the protective cap just before installing it.

Insert the sensor -4- into the mount -2-.





Caution

The Rain/Light Recognition Sensor -G397- must not have any embedded objects or bubbles between it and the windshield so that it functions correctly.

- Press on the clips -1 and 5- until they audibly engage.
- Connect the connector -3-.
- After replacing the rain/light recognition sensor, it must be re-coded in "Guided Functions" mode using the \Rightarrow Vehicle diagnostic tester.

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2 Windshield Washer System

- ⇒ -2.1 Windshield Washer System", page 60
- ⇒ F2.2 luid Reservoir, Removing and Installing", page 62
- ⇒ W2.3 asher Fluid Level Sensor, Removing and Installing", page 63
- ⇒ W2.4 asher Pump, Removing and Installing", page 64
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not ⇒ N2.5 ozzles, Removing and Installing page 64 ised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- ⇒ N2.6 ozzles, Adjusting", page 65
- 2.1 Overview - Windshield Washer System

6



10

1 - Bolt

□ 8 Nm

2 - Washer Fluid Reservoir

Removing and Installing. Refer to ⇒ F2.2 luid Reservoir, Removing and Installing", page 62

3 - Screen

4 - Cap otected by copyright. Copying for private AUDI / □ For the filler neck! by AUDI

5 - Right Washer Nozzle

- □ Versions with Right Washer Nozzle Heater -Z21-
- Removing and Installing. Refer to ⇒ N2.5 ozzles, Removing and Installing", page <u>64</u> .
- □ Adjusting: ⇒ Maintenance; Booklet 826; Maintenance; Windshield Washer System: Checking Spray Pattern and Adjusting if Necessary.

6 - Left Washer Nozzle

- Versions with Left Washer Nozzle Heater -Z20-
- □ Removing and Installing. Refer to ⇒ N2.5 ozzles, Removing and Installing", page
- 12 A92-10319 □ Adjusting: ⇒ Maintenance; Booklet 826; Maintenance; Windshield Washer System: Checking Spray
- Pattern and Adjusting if Necessary.

7 - Washer Fluid Hose

□ For the windshield washer system

8 - Grommet

☐ For the windshield washer fluid hose inside the hood

2

9 - Grommet

Replace if damaged

10 - Windshield Washer Fluid Level Sensor -G33-

□ Removing and Installing. Refer to ⇒ W2.3 asher Fluid Level Sensor, Removing and Installing", page 63 .

11 - Windshield Washer Pump -V5-

□ Removing and Installing. Refer to ⇒ W2.4 asher Pump, Removing and Installing", page 64.

12 - Grommet

Replace if damaged

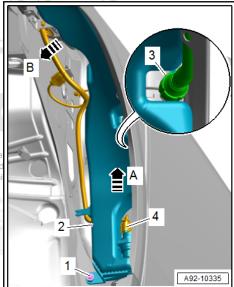
2.2 Washer Fluid Reservoir, Removing and Installing

Special tools and workshop equipment required

◆ Drip Tray

Removing

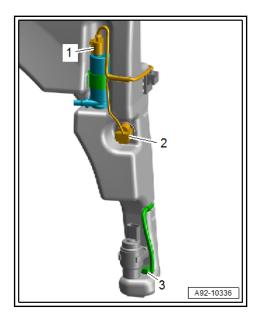
- Remove the filler neck cap.
- Remove the front fender cover. Refer to \Rightarrow Body Exterior; Rep. Gr. 50; Fender; Fender, Removing and Installing.
- Remove the left front wheel housing liner. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Front Wheel Housing Liner, Removing and Installing.
- Disconnect the connector -4- from the Windshield Washer Pump -V5-.



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- Place a drip tray under the washer fluid reservoir.
- Remove the hose -3- from the Headlamp Washer System Pump -V11-.
- Remove the bolt -1-.
- Disengage the rear washer fluid reservoir -2- upward in direction of -arrow A- and remove it toward the front in direction of -arrow B-.
- Disconnect the connectors:





- 1 For the Headlamp Washer System Pump -V11-
- 2 For the Windshield Washer Fluid Level Sensor -G33-
- Remove the hose -3- from the Windshield Washer Pump
- Free up the wiring harness.

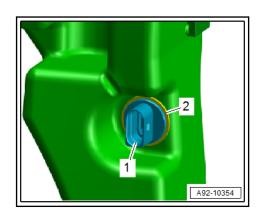
Installing

Install in reverse order of removal.

Tightening Specifications

- ♦ Refer to ⇒ -2.1 Windshield Washer System", page 60
- Prwindshield Washer Eluid to version and or in whole, is not permitted the state of accept any liability 2.3 sors Removing and Installing ument. Copyright by AUDI AG.

Removing



- Remove the washer fluid reservoir. Refer to <u>⇒ F2.2 luid Res-</u> ervoir, Removing and Installing", page 62.
- Remove the Windshield Washer Fluid Level Sensor -G33--1- from the washer fluid reservoir.

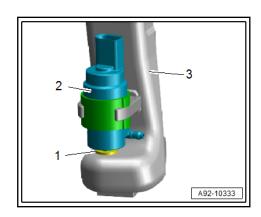
Installing

Install in the reverse order of removal while noting the following:

Check the grommet -2- for damage.

2.4 Windshield Washer Pump, Removing and Installing

Removing



- Remove the washer fluid reservoir. Refer to ⇒ F2.2 luid Reservoir, Removing and Installing", page 62.
- Remove the windshield washer pump -2- upward from the washer fluid reservoir -3-.

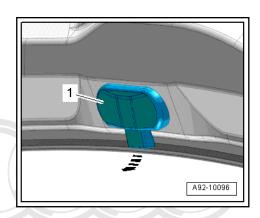
Installing

Install in the reverse order of removal while noting the following:

Check the grommet -1- for damage.

2.5 Washer Nozzles, Removing and Instal-

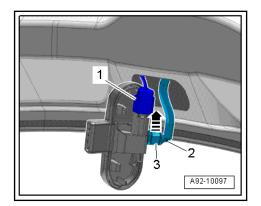
Removing



- Unclip the washer nozzle -1- for the windshield washer system from the front lid in the direction of -arrow-.
- Open the clip -3- in direction of -arrow- and disconnect the washer fluid hose -2- from the windshield washer system washer nozzle.

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Disconnect the connector -1-, if equipped.

Installing

Install in the reverse order of removal while noting the following:

When connecting the washer fluid hose, make sure that the clip engages audibly into the washer fluid hose connection.

2.6 Washer Nozzles, Adjusting

- Adjust the spray nozzles for the windshield washer system. Refer to ⇒ Maintenance; Booklet 826; Maintenance; Windshield Washer System; Spray Pattern, Checking and Adjust-
- Clean the dirty washer nozzle if the spray field does not match the specifications.

Washer Nozzle, Cleaning:



Caution

There is a risk of damage.

- ◆ Do not use any objects to clean the washer nozzles!
- Remove the washer nozzle. Refer to ⇒ N2.5 ozzles, Removing and Installing", page 64.
- Rinse the washer nozzle with clean water opposite the spray
- To remove any remaining contaminants, the washer nozzle may only be blown out with compressed air in the opposite direction of the spray direction.
- If the spray field still does not match the specifications, replace the washer nozzle.



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3 **Headlamp Washer System**

- ⇒ -3.1 Headlamp Washer System", page 66
- ⇒ W3.2 asher System PumpV11, Removing and Installing", page 67
- ⇒ N3.3 ozzles, Removing and Installing", page 67
- ⇒ N3.4 ozzles, Adjusting", page 68

3.1 Overview - Headlamp Washer System

1 - Bolt

- □ 0.9 Nm
- Quantity: 2

2 - Right Washer Nozzle

Removing and Installing. Refer to ⇒ N3.3 ozzles, Removing and Installing", page

3 - Bracket

4 - Washer Fluid Reservoir

Removing and Installing. Refer to ⇒ F2.2 luid Reservoir, Removing and Installing", page 62.

5 - Insulation

□ For the headlamp washer system pump

6 - Headlamp Washer System Pump -V11-

□ Removing and Installing. Refer to ⇒ W3.2 asher System PumpV11, Removing and Installing", page

7 - Grommet

□ Replace if damaged

8 - Washer Fluid Hose

From the headlamp washer system pump

9 - Bracket

10 - Washer Fluid Hose

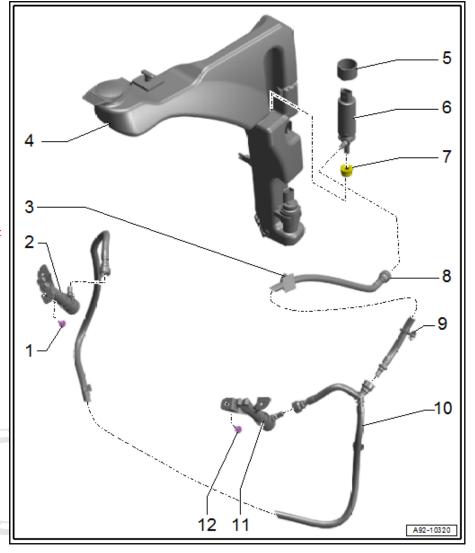
□ For the spray nozzles

11 - Left Washer Nozzle

Removing and Installing, Refer to N3.3 ozzles Removing and Installing", page 67.

12 - Bolt permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

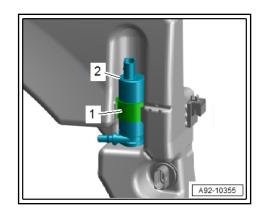
- □ 0.9 Nm
- Quantity: 2





3.2 Headlamp Washer System Pump -V11-, Removing and Installing

Removing



- Remove the washer fluid reservoir. Refer to ⇒ F2.2 luid Reservoir, Removing and Installing", page 62.
- Remove the Headlamp Washer System Pump -V11- -2- out of the washer fluid reservoir.

Installing

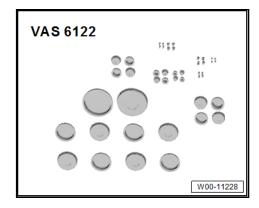
Install in the reverse order of removal while noting the following:

- Check the grommet for damage.
- When installing a new pump, it must be wrapped with the insulation -1- to prevent it from rattling.

Washer Nozzles, Removing and Instal-3.3

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♦ Engine Bung Set -VAS6122-



Removing

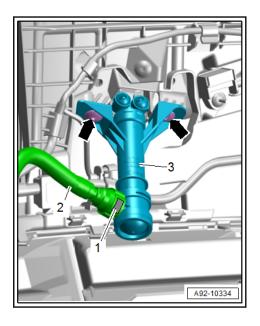
Remove the front wheel spoiler. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview - Front Wheel Housing Liner.

Vehicles with Auxiliary Radiator:

Remove the front bumper cover. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Bumper Cover, Removing and Installing.

Continuation for All Vehicles:

- Remove the cover for the headlamp washer system spray nozzle. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Attachments, Removing and Installing.
- Remove the bolts -arrows-.



- Remove the spray nozzle -3- toward the rear.
- Place the drip tray under the washer nozzle.
- Remove the washer fluid hose -2- by pressing the release buttons -1-.
- Seal the hose coupling with clean plugs from the Engine Bung Set -VAS6122-.

Installing

Install in reverse order of removal.

Tightening Specifications

Refer to ⇒ -3.1 Headlamp Washer System", page 66

Washer Nozzles, Adjusting 3.4

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Note

The washer nozzles supplied are already adjusted at the factory and must not be adjusted following installation.



Washer Fluid Hoses 4

Refer to ⇒ Electrical Equipment General Information; Rep. Gr. 92; Windshield Washer Fluid Hoses.



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94 – Exterior Lights, Switches

1 Headlamps

- ⇒ -1.1 Headlamps", page 70
- ⇒ R1.2 emoving and Installing", page 75
- ⇒ A1.3 djusting", page 80
- ⇒ C1.4 alibrating", page 91
- ⇒ F1.5 ront Turn Signal BulbM5/Right Front Turn Signal BulbM7, Removing and Installing", page 101
- ⇒ f1.6 or Left Stationary Cornering LampM51/Right Stationary Cornering LampM52, Removing and Installing", page 102
- ⇒ H1.7 ID Headlamp BulbL13/Right HID Headlamp BulbL14 with Left HID Headlamp Control ModuleJ343/J344, Removing and Installing", page 103
- ⇒ D1.8 aytime Running Lamp and Position Lamp LED ModuleL176/Right Daytime Running Lamp and Position Lamp LED ModuleL177, Removing and Installing", page 104
- ⇒ D1.9 aytime Running Lamp and Position Lamp Control ModuleJ860/Right Daytime Running Lamp and Position Lamp Control ModuleJ861, Removing and Installing", page 105
- ⇒ H1.10 eadlamp Power Output ModuleJ667/Right Headlamp Power Output ModuleJ668, Removing and Installing", page 106
- ⇒ H1.11 ID Headlamp Control ModuleJ343/Right HID Headlamp Control ModuleJ344, Removing and Installing", page 106
- ⇒ P1.12 ower Output Module, Removing and Installing", page 107
- ⇒ C1.13 hanging from RHD to LHD (Not for North American Market)", page 109
- ⇒ C1.14 hanging from LHD to RHD (Not for North American Market)", page 109

1.1 Overview - Headlamps

- ⇒ -1.1.1 Headlamps, Headlamp Mount", page 70
- ⇒ -1.1.2 Headlamps, HID Headlamps", page 71
- ⇒ -1.1.3 Headlamps, LED Headlamps", page 73

1.1.1 Overview - Headlamps, Headlamp Mount



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1 - Lock Carrier

□ For mounting the head-

2 - Mount

- □ For headlamp
- Removing and Installing. Refer to ⇒ Body Exterior; Rep. Gr. 50; Lock Carrier; Lock Carrier, Removing and Installing.
- 3 Clip

4 - Adjusting Screw

- 5 Bolt
 - □ 9 Nm
 - ☐ Quantity: 2

6 - Bracket

□ For headlamp

7 - Mount

- ☐ For the bumper cover
- To secure the headlamp
- Removing and installing. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Overview - Bumper Cover.

8 - Bolt

- ☐ Tightening specification. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Overview - Bumper Cover.
- Quantity: 2

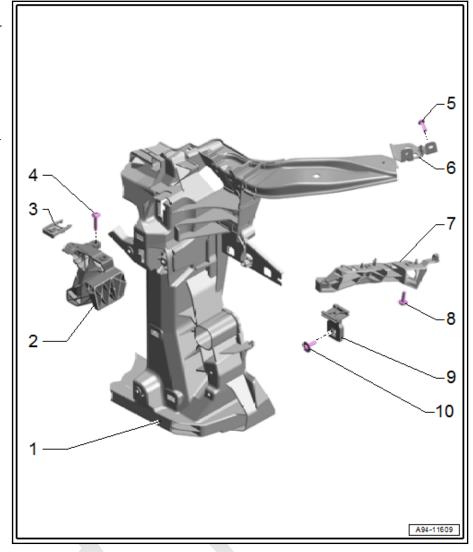
9 - Mount

- □ For headlamp
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not Removing and Installing Refer to M142:2 ount Removing and Installing page 78.

10 - Bolt

□ 4.5 Nm

1.1.2 Overview - Headlamps, HID Headlamps



1 - Daytime Running Lamp and Position Lamp Control Module

- Left Daytime Running Lamp and Position
 Lamp Control Module -J860-
- Right Daytime Running Lamp and Position
 Lamp Control Module -J861-
- □ Removing and Installing. Refer to ⇒ D1.9 aytime Running Lamp and Position Lamp Control ModuleJ860/Right Daytime Running Lamp and Position Lamp Control ModuleJ861, Removing and Installing", page 105.

2 - Breather Hose

For headlamp

3 - Headlamps

- ☐ The Left Headlamp
 Beam Adjustment Motor -V48-/Right Headlamp Beam Adjustment
 Motor -V49- is in the
 headlamp housing and
 cannot be replaced
 separately if it is faulty.
- ☐ The Left Front Side Marker Lamp Bulb -M33-, Right Front Side Marker Lamp Bulb -M34- are North Ameri-

can market-specific located in the headlamp housing and cannot be replaced separately if faulty.

☐ Removing and Installing. Refer to ⇒ R1.2.1 emoving and Installing", page 75.

4 - Adjusting Nut

- □ 13 Nm
- For the headlamp height adjustment
- Quantity: 2

5 - Bolt

□ 4.5 Nm

6 - Front Turn Signal Bulb

- Bulb, Replacing. Refer to ⇒ F1.5 ront Turn Signal BulbM5/Right Front Turn Signal BulbM7, Removing and Installing", page 101.
- ☐ Left Front Turn Signal Bulb -M5-
- ☐ Right Front Turn Signal Bulb -M7-
- □ 12 V, 24 W

7 - Cornering Lamp Bulb

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- Left Stationary Cornering Lampt-M512 rerrectness of information in this document. Copyright by AUDI AG.
- ☐ Right Stationary Cornering Lamp -M52-
- □ 12 V, 35 W (H8)



	Removing and Installing. Refer to \Rightarrow f1.6 or Left Stationary Cornering LampM51/Right Stationary Cornering LampM52, Removing and Installing", page 102.				
8 - Adjuster					
	For adjusting the headlamp housing to the bumper contour				
9 - Bo	9 - Bolt				
	4.5 Nm				
10 - F	lousing Cover				
11 - B	Bolt				
	4.5 Nm				
12 - A	adjuster				
	For adjusting the headlamp housing to the bumper contour				
13 - F	IID Headlamp Bulb				
	Integrated in Left HID Headlamp Control Module -J343-				
	Integrated in Right HID Headlamp Control Module -J344-				
	Removing and Installing. Refer to ⇒ H1.11 ID Headlamp Control ModuleJ343/Right HID Headlamp Control ModuleJ344, Removing and Installing", page 106.				
14 - H	lousing Cover				
15 - D	Daytime Running Lamp and Position Lamp LED Module				
	☐ Left Daytime Running Lamp and Position Lamp LED Module -L176-				
	☐ Right Daytime Running Lamp and Position Lamp LED Module -L177-				
	Removing and Installing. Refer to ⇒ D1.8 aytime Running Lamp and Position Lamp LED ModuleL176/Right Daytime Running Lamp and Position Lamp LED ModuleL177, Removing and Installing", page 104.				
40 0					
16 - B	1.5 Nm				
	Overatity 2				
	permitted unless authorised by AUDLAG AUDLAG does not guarantee or accept any liability				
	Sealing Frame with respect to the correctness of information in this document. Copyright by AUDI AG. Removing and Installing. Refer to ⇒ F1.2.4 rame, Removing and installing", page 79.				
	ilter Membrane				
	Removing and Installing. Refer to ⇒ M1.2.3 embrane, Removing and Installing", page 78.				
19 - B	1.5 Nm				
_	Quantity: 3				
_	Quantity. 0				

Overview - Headlamps, LED Headlamps 1.1.3

1 - Bolt

- □ 1.5 Nm
- Quantity: 4

2 - LED Headlamp Power Output Module 1

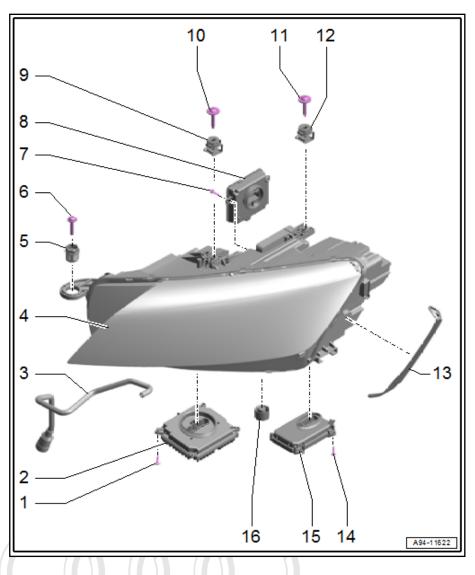
- For low beam
- ☐ Right LED Headlamp Power Output Module 1 -A27-, Left LED Headlamp Power Output Module 1 -A31-
- □ Removing and Installing. Refer to ⇒ L1.12.1 ED Headlamp Power Output Module 1A27/Left LED Headlamp Power Output Module 1A31, Removing and Installing", page 107.

3 - Breather Hose

□ For headlamp

4 - Headlamps

- ☐ The Left Headlamp
 Beam Adjustment Motor -V48-/Right Headlamp Beam Adjustment
 Motor -V49- is in the
 headlamp housing and
 cannot be replaced
 separately if it is faulty.
- ☐ The Left Headlamp Fan -V407-/Right Headlamp Fan -V408- is in the headlamp housing and cannot be replaced separately if it is faulty.



- ☐ The Left Matrix Headlamp Power Output Module -A44-, Right Matrix Headlamp Power Output Module -A45- are located in the headlamp housing and cannot be replaced separately if faulty.
- ☐ The Left Front Side Marker Lamp Bulb -M33-, Right Front Side Marker Lamp Bulb -M34- are North American market-specific located in the headlamp housing and cannot be replaced separately if faulty.
- □ Removing and Installing. Refer to <u>⇒ R1.2.1 emoving and Installing</u>", page 75.

5 - Adjusting Nut

- □ 13 Nm
- ☐ For the headlamp height adjustment
- Quantity: 2

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6 - Bolt

□ 4.5 Nm

7 - Bolt

- □ 1.5 Nm
- Quantity: 3

8 - LED Headlamp Power Output Module 2

- ☐ For daytime running lamps and turn signal
- □ Right LED Headlamp Power Output Module 2 -A28-, Left LED Headlamp Power Output Module 2 -A32-



□ Removing and Installing. Refer to ⇒ L1.12.2 ED Headlamp Power Output Module 2A28			
	Headlamp Power Output Module 2A32, Removing and Installing", page 108		
9 - Ac	ljuster		
	For adjusting the headlamp housing to the bumper contour		
10 - E	Bolt		
	4.5 Nm		
11 - E	Solt 4.5 Nm		
12 - A	djuster		
	For adjusting the headlamp housing to the bumper contour		
13 - Sealing Frame			
	Removing and Installing. Refer to <u>⇒ F1.2.4 rame, Removing and installing</u> ", page 79.		
14 - E	solt		
	1.5 Nm		
	Quantity: 3		
15 - H	leadlamp Power Output Module pying for private or commercial purposes, in part or in whole, is not		
	Left Headlamp Power Output Module A667 AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.		
	Right Headlamp Power Output Module -J668-		
	Removing and Installing. Refer to \Rightarrow H1.10 eadlamp Power Output ModuleJ667/Right Headlamp Power Output ModuleJ668, Removing and Installing", page 106.		
16 - F	ilter Membrane		
	Removing and Installing. Refer to <u>⇒ M1.2.3 embrane, Removing and Installing</u> ", page 78.		

1.2 Headlamp, Removing and Installing

- ⇒ R1.2.1 emoving and Installing", page 75
- ⇒ M1.2.2 ount, Removing and Installing", page 78
- ⇒ M1.2.3 embrane, Removing and Installing", page 78
- ⇒ F1.2.4 rame, Removing and installing", page 79

1.2.1 Headlamp, Removing and Installing

Removing

- Turn the light switch to position "0".
- Switch off the ignition and all electrical equipment. Place the ignition key outside of the vehicle.

Vehicles with HID Headlamps:



WARNING

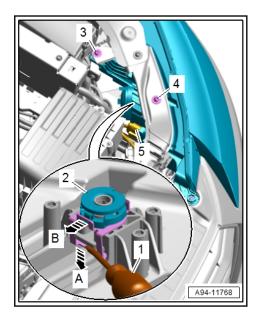
Extremely dangerous due to high-voltage.

- ♦ HID headlamp usage and safety precautions. Refer to ≥ <u>H1.4 eadlamps Usage and Safety Precautions", page $\overline{\mathcal{Z}}$ </u>
- Do not operate the flashers.

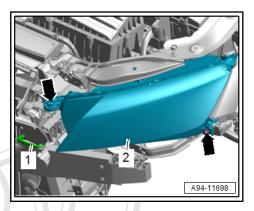
Continuation for All Vehicles:

Remove the front bumper cover. Refer to \Rightarrow Body Exterior; Rep. Gr. 63; Front Bumper; Bumper Cover, Removing and Installing.

- Remove the bumper cover mount Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Overview - Bumper Cover.
- Disconnect the connector -5-.



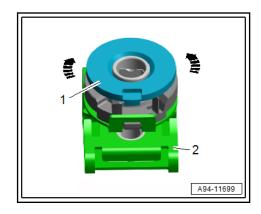
- Using a felt-tip pen, mark the headlamp installation position at the bolts -3 and 4-.
- Remove the bolts -3 and 4-.
- Slide a screwdriver -1- as shown between the adjuster and the headlamp housing. Release the retainer in direction of -arrow A- and remove the adjuster -2- in direction of -arrow B-.
- Remove the bolts -arrows-.



- Unclip the breather hose -1- from the radiator air duct and free it up.
- Remove the headlamp -2-.
- Right headlamp: Disconnect the connector from the garage door opener control module, if equipped.
- If the headlamp is to be replaced, also remove the following components:
- Garage door opener control module mount. Refer to provide or commercial purposes, in part or in whole, is not D2.4.2 oor Opener Control Module, Mount, Removing and DI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG. Installing", page 248



Installing



Install in the reverse order of removal while noting the following:

- Check all of the adjusters -2- on the headlamp. To do so, the adjusting nut -1- must be gently screwed on -arrows-.
- Screw the adjusting nuts all the way downward, but do not tighten.
- Bring the headlamp into the installation position.



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- Connect the connector -4-.
- Align the headlamp with the fender edge.
- The headlamp must be flush with the fender.
- Align the bolts -2 and 3- according to the markings made during removal and tighten them.

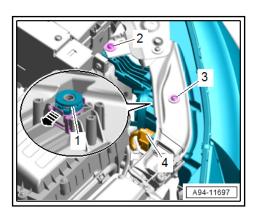


Note

- Tightening the bolt automatically turns the adjusting nut on the adjuster towards the headlamp mounting point and secures it.
- Ignore the -arrow-.
- Tighten the remaining bolts.
- Adjust the headlamp. Refer to ⇒ A1.3 djusting", page 80.

Tightening Specifications

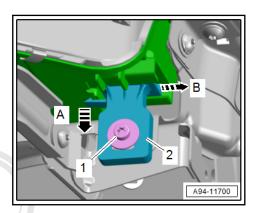
Refer to ⇒ -1.1 Headlamps", page 70



1.2.2 Headlamp Mount, Removing and Installing

Removing

- Remove the front bumper cover. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Bumper Cover, Removing and Installing.
- Remove the bumper cover mount Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Overview - Bumper Cover.
- Remove the bolt -1-.



Release the retainer in direction of -arrow A- and remove the headlamp mount -2- in direction of -arrow B-.

Install in the reverse order of removal while noting the following:

Insert the headlamp mount until it engages audibly and tighten the bolt.

Tightening Specifications

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Refer to ⇒ -1.1.1 her headlamps in headlamps Mountag page if Quarantee or accept any liability Copyright by AUDI AG.

1.2.3 Filter Membrane, Removing and Installing

Removing

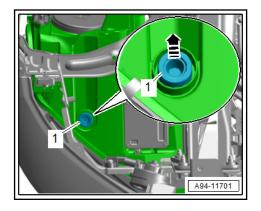
Remove the front wheel spoiler. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview - Front Wheel Housing Liner.

Vehicles with Auxiliary Radiator:

- Remove the front bumper cover. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Bumper Cover, Removing and Installing.
- Remove the auxiliary radiator air duct by pushing the air duct outward and removing it.



Continuation for All Vehicles:



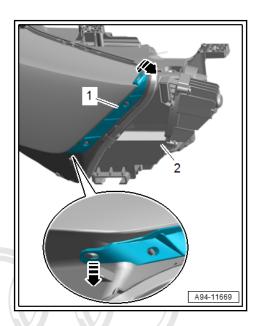
Pry out the filter membrane -1- in direction of -arrow- and remove it.

Installing

Install in reverse order of removal.

Sealing Frame, Removing and instal-1.2.4 ling

Removing



- Remove the headlamp. Refer to ⇒ R1.2 emoving and Installing", page 75.
- Detach the sealing frame -1- from the top and bottom of the headlamp -2- in direction of -arrows- and remove it.

Installing

Install in reverse order of removal.

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1.3 Headlamp, Adjusting

- ⇒ A1.3.1 djusting, General Information", page 80
- ⇒ A1.3.2 djusting, HID Headlamp", page 81
- ⇒ A1.3.3 djusting, LED Headlamp", page 84
- ⇒ A1.3.4 djusting, HID Headlamps, North American Market Version", page 86
- ⇒ A1.3.5 djusting, LED Headlamps, Market-Specific Version NAR", page 88

Headlamp, Adjusting, General Information

- The following test and adjustment description applies to all countries.
- However, national guidelines or regulations of the country must be observed.

Testing and Adjusting Conditions

- Tire pressure is OK.
- · The headlamp glass must be clean and dry.
- · The headlamp glass must not be damaged.
- Headlamp reflectors and bulbs are OK.
- Vehicles with Matrix LED headlamps: only use the Headlight Adjusting Unit -VAS5209B- or Headlight Adjusting Unit -VAS621001- for the headlamp adjustment, because after the headlamp adjustment the Matrix LED headlamps must be calibrated. Refer to ⇒ C1.4 alibrating", page 91.
- · The vehicle must be under load.

Vehicle load on driver seat in otherwise unloaded vehicle (curb weight).

One person or 75 kg (165.35 lbs).

The curb weight is the weight of the operational vehicle with a completely full fuel tank, including the weight of all equipment carried while in operation.

- · Fuel tank: at least 90% full.
- Equipment: for example, spare tire, tools, vehicle jack, fire extinguisher, etc.

If the fuel tank is not at least 90% full, the load must be created by copyright. Copying for private or commercial purposes, in part or in whole, is not as follows.

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 Check the fuel tank fill level in the instrument cluster fuel gauge and compare it with the following table. Place additional weight in the luggage compartment, if necessary.

Fuel Gauge	Additional Weight in kg
1/4	38 (83.77 lbs)
1/2	25 (55.11 lbs)
3/4	13 (28.66 lbs)
full	0

Example: if the fuel tank is half full, an additional 25 kg (55.12 lbs) must be placed in the luggage compartment.

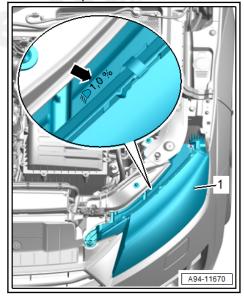






Use containers filled with water as additional weight (a five liter container filled with water weighs approximately 5 kg (11.02 lbs)).

- Roll the vehicle several meters or move it back and forth several times to set the springs.
- The electro-mechanical parking brake must not be engaged so that the vehicle is not under stress.
- The vehicle and headlamp adjusting unit must be on a level surface.
- The headlamp must cool down to room temperature -- open the hood and touch the housing cover on the back of the in whole, is not headlamp! ted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- The angle dimension -arrow- is stamped for ECE countries on the upper edge of the headlamp -1- in "%".



 The market-specific angle dimension for North America is 0.7%.



Note

The percentage value is based on a 10 meter projection distance. An angle dimension of 1.0%, for example, converts to 10 cm.

1.3.2 Headlamp, Adjusting, HID Headlamp

The headlamp must be calibrated after the following procedures:

- Headlamp position was changed (removing and installing, loosening and tightening the screws)
- Headlamp Range Control Module -J431- was replaced.
- · One of the level control system sensors was replaced.
- There is an entry in the DTC memory that indicates the headlamp basic setting is missing.

Requirements

Pay attention to the testing and adjustment requirements. Refer to ⇒ A1.3.1 djusting, General Information", page 80.

Procedure

- Turn the light switch to "low beam" not to "Auto".
- Close all the doors and the engine compartment lid and keep them closed for the duration of the testing/adjusting procedure.
- Connect the ⇒ Vehicle diagnostic tester.
- Select the Diagnostic mode and start the diagnosis.
- Select the Test plan tab.
- Select the Select individual test button and select the following tree structure consecutively:
- Body
- Electrical system
- 01 OBD-capable systems
- 55 Headlamp Range Control Module J431/J745
- 55 Headlamp Range Control, Functions
- 55 Basic setting



Note

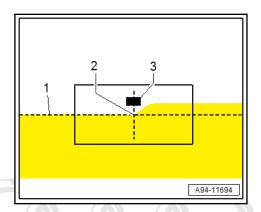
The headlamps move into the basic setting with this program.

- Start the selected program and follow the instructions on the Vehicle Diagnostic Tester display.
- During the program, it will be asked to perform a headlamp adjustment.

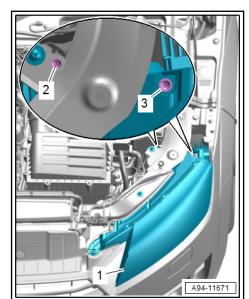
The headlamp-adjusting-unit must be aligned to the vehicle any liability

- To do this, slide the headlamp adjusting unit a specified distance centered in front of the vehicle and aligned to the vehicle front. Refer to ⇒ Headlamp Adjusting Operating Instructions.
- Slide the headlamp adjusting unit in front of the corresponding headlamp and check the alignment again.
- Adjust the angle dimension on the headlamp adjusting unit. Refer to the ⇒ Headlamp Adjusting Unit Operating Instructions.
- The horizontal cut-off line must touch the cut-off line -1- on the adjusting unit test surface.





- The bend point -2- between the left horizontal part and the right rising part of the cut-off line must run vertically through the central mark -3-. The bright core of the light beam must be to the right of the vertical.
- To determine the bend point -2- more easily, cover and uncover the left half of the headlamp (seen in direction of travel) several times. Then check the low beam again.
- After adjusting the low beam according to the instructions, the center of the high beam light beam must be on the central marking -3-.
- To adjust the height of the headlamp of 10 infirst set the cut off in whole, is not line just under the dividing line with the adjustment screw accept any liability -2-.



- Then adjust the cut-off line on the dividing line starting from the bottom.
- For side adjustment, turn the adjusting screw -3-.



The right headlamp layout is a mirror image.

- After successful headlamp adjustment, follow the instructions on the display of the Vehicle Diagnostic Tester.
- Disconnect the diagnostic connector.

1.3.3 Headlamp, Adjusting, LED Headlamp

The Headlamp Must be Calibrated After the Following Procedures:

- Headlamp position was changed (removing and installing, loosening and tightening the screws)
- Headlamp Range Control Module -J431- was replaced.
- · One of the level control system sensors was replaced.
- There is an entry in the DTC memory that indicates the headlamp basic setting is missing.

Requirements

Pay attention to the testing and adjustment requirements.
 Refer to ⇒ A1.3.1 djusting, General Information", page 80.

Procedure

- Turn the light switch to "low beam" not to "Auto".
- Close all the doors and the rear lid and keep them closed for the duration of the testing/adjusting procedure.
- Connect the ⇒ Vehicle diagnostic tester.
- Select the Diagnostic mode and start the diagnosis.
- Select the Test plan tab.
- Select the <u>Select individual test</u> button and select the following tree structure consecutively:
- ♦ Body
- Electrical system
- 01 OBD-capable systems
- ◆ 55 Headlamp Range Control Module J431/J745
- 55 Headlamp Range Control, Functions
- ♦ 55 Basic setting



Note

The headlamps move into the basic setting with this program.

- Start the selected program and follow the instructions on the Vehicle Diagnostic Tester display.
- During the program, it will be asked to perform a headlamp adjustment.

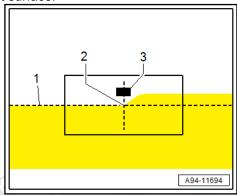
The headlamp adjusting unit must be aligned to the vehicle.

- To do this, slide the headlamp adjusting unit a distance of 100 mm centered in front of the vehicle and aligned to the vehicle front. Refer to ⇒ Headlamp Adjusting Unit Operating Instructions.
- Slide the headlamp adjusting unit in front of the corresponding headlamp and check the alignment again.
- The headlamp adjusting unit must be aligned at the center of the marked reflector segment -arrow-.

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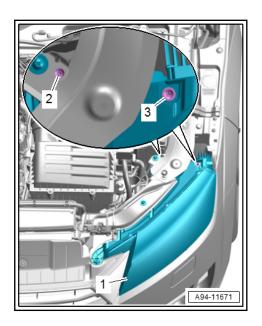


- Adjust the angle dimension on the headlamp adjusting unit. Refer to the ⇒ Headlamp Adjusting Unit Operating Instruc-
- The horizontal cut-off line must touch the cut-off line -1- on the adjusting unit test surface.



- The bend point -2- between the left horizontal part and the right rising part of the cut-off line must run vertically through the central mark -3-. The bright core of the light beam must be to the right of the vertical.
- To determine the bend point -2- more easily, cover and uncover the left half of the headlamp (seen in direction of travel) several times. Then check the low beam again.
- After adjusting the low beam according to the instructions, the center of the high beam light beam must be on the central marking -3-.
- To adjust the height of the headlamp of by first set the cut-off, is not line just under the dividing line with the adjustment screw any liability with respect to the correctness of information in this document. Copyright by AUDI AG. -2-.





- Then adjust the cut-off line on the dividing line starting from the bottom.
- For side adjustment, turn the adjusting screw -3-.



The right headlamp layout is a mirror image.

- After successful headlamp adjustment, follow the instructions on the display of the Vehicle Diagnostic Tester.
- Disconnect the diagnostic connector.

1.3.4 Headlamps, Adjusting, HID Headlamps, North American Market Version

The headlamp must be calibrated after the following procedures:

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- Headlamp position was changed (removing and installing, loosening and tightening the screws)
- Headlamp Range Control Module -J431- was replaced.
- One of the level control system sensors was replaced.
- There is an entry in the DTC memory that indicates the headlamp basic setting is missing.

Requirements

Pay attention to the testing and adjustment requirements. Refer to ⇒ A1.3.1 djusting, General Information", page 80 .

Procedure

- Turn the light switch to "low beam" not to "Auto".
- Close all the doors and the rear lid and keep them closed for the duration of the testing/adjusting procedure.
- Connect the ⇒ Vehicle diagnostic tester.
- Select the Diagnostic mode and start the diagnosis.
- Select the Test plan tab.



- Select the <u>Select individual test</u> button and select the following tree structure consecutively:
- ♦ Body
- ◆ Electrical system
- ♦ 01 OBD-capable systems
- ◆ 55 Headlamp Range Control Module J431/J745
- ◆ 55 Headlamp Range Control, Functions
- ♦ 55 Basic setting

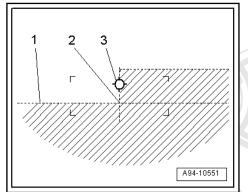


The headlamps move into the basic setting with this program.

- Start the selected program and follow the instructions on the Vehicle Diagnostic Tester display.
- During the program, it will be asked to perform a headlamp adjustment.

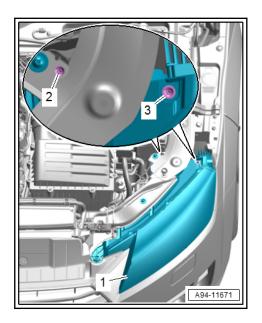
The headlamp adjusting unit must be aligned to the vehicle.

- To do this, slide the headlamp adjusting unit a specified distance centered in front of the vehicle and aligned to the vehicle front. Refer to ⇒ Headlamp Adjusting Operating Instructions.
- Slide the headlamp adjusting unit in front of the corresponding headlamp and check the alignment again.
- Adjust the angle dimension on the headlamp adjusting unit. Refer to the ⇒ Headlamp Adjusting Unit Operating Instructions.
- The horizontal cut-off line must touch the cut-off line -1- on the adjusting unit test surface.



- The bend point -2- between the left horizontal part and the right rising part of the cut-off line must run vertically through the central mark -3-. The bright core of the light beam must be to the right of the vertical copyright. Copying for private or commercial purposes, in part or in whole, is not
- permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability

 To determine the bend point accept any liability experience and socument. Copyright by AUDI AG. uncover the left half of the headlamp (seen in direction of travel) several times. Then check the low beam again.
- After adjusting the low beam according to the instructions, the center of the high beam light beam must be on the central marking -3-.
- To adjust the height of the headlamp -1-, first set the cut-off line just under the dividing line with the adjustment screw -2-.



- Then adjust the cut-off line on the dividing line starting from the bottom.
- A side adjustment is not intended for North America market versions.
- The adjusting bolt -3- for the side adjustment is sealed with a plug on North American vehicles. Refer to ⇒ Electronic Parts Catalog (ETKA).



The right headlamp layout is a mirror image.

- After successful headlamp adjustment, follow the instructions on the display of the Vehicle Diagnostic Tester.
- Disconnect the diagnostic connector.

1.3.5 Headlamps, Adjusting, LED Headlamps, Market-Specific Version NAR

The headlamp must be calibrated after the following procedures:

- Headlamp position was changed (removing and installing, loosening and tightening the screws)
- Headlamp Range Control Module -J431- was replaced.
- One of the level control system sensors was replaced.
- There is an entry in the DTC memory that indicates the headlamp basic setting is missing.

Requirements

Pay attention to the testing and adjustment requirements.
 Refer to ⇒ A1.3.1 djusting, General Information", page 80

Procedure

- Turn the light switch to "low beam" not to "Auto".
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not close all the doors and the rear lid and keep them closed fool AG. AUDI AG does not guarantee or accept any liability the duration of the testing/adjusting procedure; to the correctness of information in this document. Copyright by AUDI AG.
- Connect the ⇒ Vehicle diagnostic tester.



- Select the Diagnostic mode and start the diagnosis.
- Select the Test plan tab.
- Select the Select individual test button and select the following tree structure consecutively:
- Body
- Electrical system
- 01 OBD-capable systems
- 55 Headlamp Range Control Module J431/J745
- 55 Headlamp Range Control, Functions
- 55 Basic setting



The headlamps move into the basic setting with this program.

- Continue to follow the instructions in the Vehicle Diagnostic Tester display.
- During the program, it will be asked to perform a headlamp adjustment.

The headlamp adjusting unit must be aligned to the vehicle.

- To do this, slide the headlamp adjusting unit a distance of 100 mm centered in front of the vehicle and aligned to the vehicle front. Refer to ⇒ Headlamp Adjusting Unit Operating Instructions.
- Slide the headlamp adjusting unit in front of the corresponding headlamp and check the alignment again.
- The headlamp adjusting unit must be aligned at the center of the marked reflector segment -arrow-.

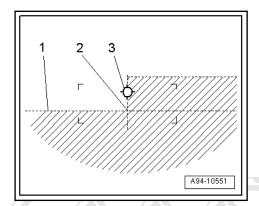


Protected Adjust the angle dimension on the headlamp adjusting unit. permitted Refer to the ⇒ Headlamp Adjusting Unit Operating Instruc-

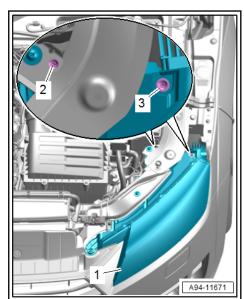
The horizontal cut-off line must touch the cut-off line -1- on the adjusting unit test surface.







- The bend point -2- between the left horizontal part and the right rising part of the cut-off line must run vertically through the central mark -3-. The bright core of the light beam must be to the right of the vertical.
- To determine the bend point -2- more easily, cover and uncover the left half of the headlamp (seen in direction of travel) several times. Then check the low beam again.
- After adjusting the low beam according to the instructions, the center of the high beam light beam must be on the central marking -3-.
- To adjust the height of the headlamp of the height of the headlamp of the height of the headlamp of the height of the headlamp. line just under the dividing line with the adjustment screw guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG. -2-.



- Then adjust the cut-off line on the dividing line starting from the bottom.
- A side adjustment is not intended for North America market
- The adjusting bolt -3- for the side adjustment is sealed with a plug on North American vehicles. Refer to ⇒ Electronic Parts Catalog (ETKA).



The right headlamp layout is a mirror image.



- After successful headlamp adjustment, follow the instructions on the display of the Vehicle Diagnostic Tester.
- Disconnect the diagnostic connector.

1.4 Headlamps, Calibrating

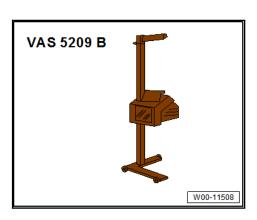
⇒ L1.4.1 ED Headlamp, Calibrating using Headlamp Adjusting UnitVAS5209B ", page 91

⇒ L1.4.2 ED Headlamp, Calibrating, using Headlamp Adjusting UnitVAS621001 ", page 96

1.4.1 Matrix LED Headlamp, Calibrating using Headlamp Adjusting Unit - VAS5209B-

Special tools and workshop equipment required

♦ Headlamp Adjusting Unit -VAS5209B-





Note

- ◆ The Matrix LED headlamp is calibrated using the Vehicle Diagnostic Tester ⇒ Vehicle diagnostic tester.
- ♦ In this procedure the low beam is set first. Then the Matrix beam high beam function is calibrated.

The Matrix Headlamp Must be Calibrated After the Following Work:

- Headlamp position was changed (removing and installing, loosening and tightening the screws)
- · The headlamp was adjusted.
- The Drivetrain Control Module -J775- was calibrated or replaced.
- · One of the level control system sensors was replaced.
- The Headlamp Range Control Module -J431- has been reprolected copyright. Copying for private or commercial purposes, in part or in whole, is not
- In the DTC memory an entry is present, which indicates an incorrect calibration of the Matrix headlamps.
- Left Matrix Headlamp Power Output Module -A44-, Right Matrix Headlamp Power Output Module -A45- was replaced.

Requirements

Pay attention to the testing and adjustment requirements.
 Refer to ⇒ A1.3.1 djusting, General Information", page 80.

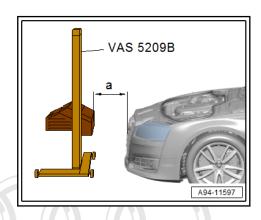


WARNING

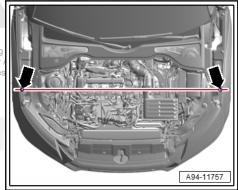
Avoid having ambient lighting too high or shaking.

If the ambient lighting is too high or is shaking, this can lead to incorrect measurements on the Headlamp Adjusting Unit -VAS5209B-.

Procedure



- Align the Headlamp Adjusting Unit -VAS5209B- at the distance -a- = 100 mm to the vehicle center. Refer to the \Rightarrow -VAS5209B- Owner's Manual.
- Check the parallel alignment of the Headlamp Adjusting Unit -VAS5209B- to the vehicle transverse axis. To do so, align the laser beam of the Headlamp Adjusting Unit -VAS5209Bto the left and right front fender bolts -arrows-.



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- Push the Headlamp Adjusting Unit -VAS5209B- in front of the left headlamp and check the parallel alignment again.
- To prevent a glare for other motorists, pay attention to the exact orientation of the headlamp adjusting unit.

Calibrating Procedure

- The Vehicle Diagnostic Tester is connected.
- Select the Diagnostic mode and start the diagnosis.
- Select the Test plan tab.
- Select the $\fbox{Select\ individual\ test}$ button and select the following tree structure consecutively:
- Body
- Electrical system

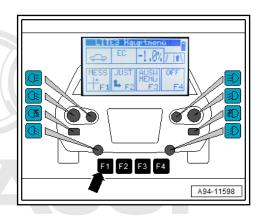


- 01 OBD-capable systems
- 55 Headlamp Range Control Module (MxB) J431
- 55 Headlamp Range Control, Functions
- ◆ 55 Matrix beam basic setting (repair group 94)

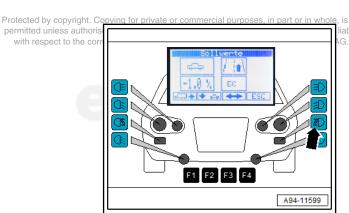
The ⇒ Vehicle diagnostic tester continues with the calibrating procedure from here. The low beam must be adjusted first for this procedure. Refer to ⇒ A1.3.3 djusting, LED Headlamp", page 84.

Further along in the program sequence a request is made to determine/read and to input the angle value of the inner segment edge of the left headlamp in the headlamp adjusting unit.

- Center the light collecting box lens to the headlamp reference segment.
- In the main menu of the Headlamp Adjusting Unit -VAS5209B- press the "F1" button -arrow- to measure the angle value.

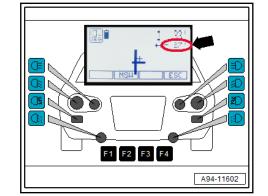


Shown on display:



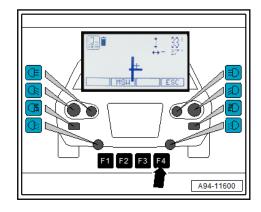
Push the button -arrow- for the left fog lamp for at least three seconds.

Shown on display:



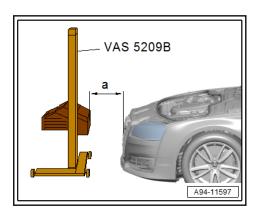
- The angle values of the inner reference segment edge are displayed.
- Enter the angle value -arrow- of the inner reference segment edge in the Vehicle Diagnostic Tester. While doing so, pay attention to the sign if necessary.
- Push the "F4" button -arrow- on the Headlamp Adjusting Unit -VAS5209B-.

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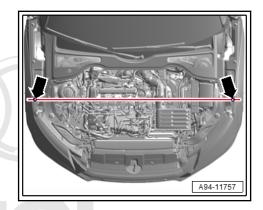
Further along in the program sequence a request is made to determine/read and to input the angle value of the inner segment edge of the right headlamp in the headlamp adjusting unit.

Align the Headlamp Adjusting Unit -VAS5209B- at the distance -a- = 100 mm to the center of the vehicle. Refer to the ⇒ -VAS5209B- Owner's Manual.



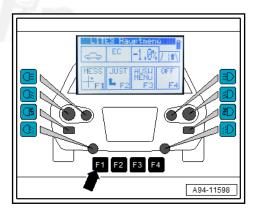
Check the parallel alignment of the Headlamp Adjusting Unit -VAS5209B- to the vehicle transverse axis. To do so, align the laser beam of the Headlamp Adjusting Unit -VAS5209Bto the left and right front fender bolts -arrows-.



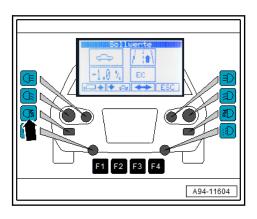


- Push the Headlamp Adjusting Unit -VAS5209B- in front of the right headlamp and check the parallel alignment again.
- Center the light collecting box lens to the headlamp refer-Profected by copyright. Copyright or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability.

 In the main menu of the Headlamp Adjusting Unit
 VAS5209B-, press the "F1" button -arrow- to measure the angle value.



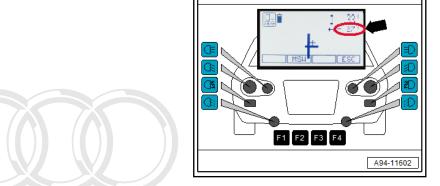
Shown on display:



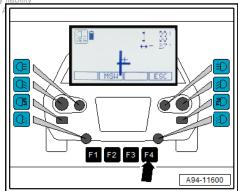
Push the button -arrow- for the right fog lamp for at least three seconds.

Shown on display:





- The angle values of the inner reference segment edge are displayed.
- Enter the angle value -arrow- of the inner reference segment edge in the Vehicle Diagnostic Tester. While doing so, pay attention to the sign if necessary.
- Push the "F4" button -arrow- on the Headlamp Adjusting Unit -VAS5209Brected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI



- After completing the calibration, read the DTC memory and correct any existing faults.
- Matrix LED Headlamp, Calibrating, 1.4.2 using Headlamp Adjusting Unit -VAS621001-

Special tools and workshop equipment required

♦ Headlamp Adjusting Unit -VAS621001-







- The Matrix LED headlamp is calibrated using the Vehicle Diagnostic Tester ⇒ Vehicle diagnostic tester.
- In this procedure the low beam is set first. Then the Matrix beam high beam function is calibrated.

The Matrix headlamp must be calibrated after the following work:

- Headlamp position was changed (removing and installing, loosening and tightening the screws)
- The headlamp was adjusted.
- The Drivetrain Control Module -J775- was calibrated or replaced.
- One of the level control system sensors was replaced.
- The Headlamph Range Control Module AJ331 Desarries or accept any liability placed. with respect to the correctness of information in this document. Copyright by AUDI AG.
- In the DTC memory an entry is present, which indicates an incorrect calibration of the Matrix headlamps.
- Left Matrix Headlamp Power Output Module -A44-, Right Matrix Headlamp Power Output Module -A45- was replaced.

Requirements

Pay attention to the testing and adjustment requirements. Refer to ⇒ A1.3.1 djusting, General Information", page 80.

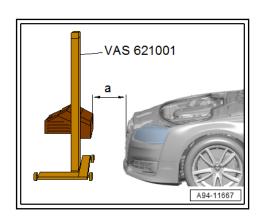


WARNING

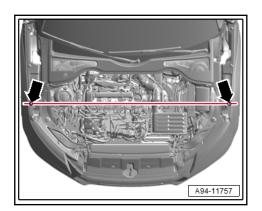
Avoid having ambient lighting too high or shaking.

If the ambient lighting is too high or is shaking, this can lead to incorrect measurements on the Headlamp Adjusting Unit -VAS621001-.

Procedure



- Align the Headlamp Adjusting Unit -VAS621001- at the distance -a- = 100 mm to the center of the vehicle. Refer to the ⇒ -VAS621001- Owner's Manual.
- Check the parallel alignment of the Headlamp Adjusting Unit -VAS621001- to the vehicle transverse axis. To do so, align the laser beam of the Headlamp Adjusting Unit -VAS621001- to the left and right front fender bolts -arrows-.



- Push the Headlamp Adjusting Unit -VAS621001- in front of the left headlamp and check the parallel alignment again.
- To prevent a glare for other motorists, pay attention to the exact orientation of the headlamp adjusting unit.

Calibrating Procedure

- The Vehicle Diagnostic Tester is connected.
- Select the Diagnostic mode and start the diagnosis.
- Select the Test plan tab.
- Select the Select individual test button and select the following tree structure consecutively:
- Body
- Electrical system
- 01 OBD-capable systems
- 55 Headlamp Range Control Module (MxB) J431
- 55 Headlamp Range Control, Functions
- 55 Matrix beam basic setting (repair group 94)

The ⇒ Vehicle diagnostic tester continues with the calibrating procedure from here. The low beam must be adjusted first for this procedure. Refer to ⇒ A1.3.3 djusting, LED Headlamp", page 84.

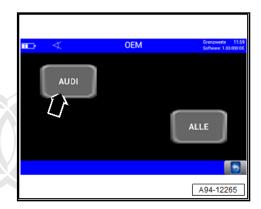
Further along in the program sequence a request is made to determine/read and to input the angle value of the inner segment edge of the left headlamp in the headlamp adjusting unit by copyright. Copying for private or commercial purposes, in part or in whole, is not

- ed unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Center the light collecting box lens to the headlamp refer respect to the correctness of information in this document. Copyright by AUDI AG. ence segment.
- To do so, press the "OEM" button -arrow- in the main menu on the Headlamp Adjusting Unit -VAS621001- to start the measurement procedure.

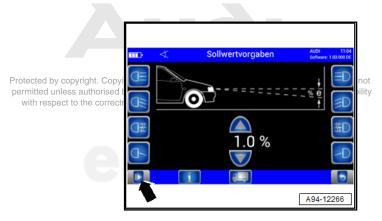




Select "Audi" -arrow-.

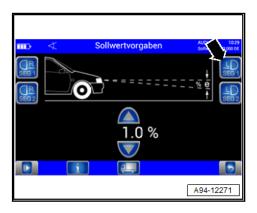


Shown on display:



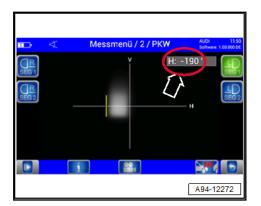
- Push the button -arrow- and wait until the light measurement is active.

Shown on display:



- Press the button -arrow-.
- Wait until the light measurement is complete.

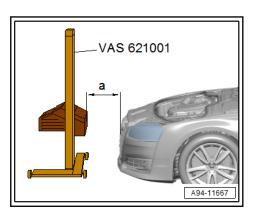
Shown on display:



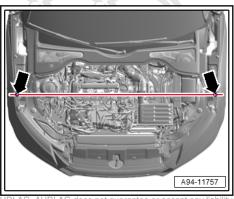
- The angle value of the inner reference segment edge is shown.
- Enter the angle value -arrow- of the inner reference segment edge in the Vehicle Diagnostic Tester. While doing so, pay attention to the sign if necessary.

Further along in the program sequence a request is made to determine/read and to input the angle value of the inner segment edge of the right headlamp in the headlamp adjusting unit.

Align the Headlamp Adjusting Unit -VAS621001- at the distance -a- = 100 mm to the center of the vehicle. Refer to the ⇒ -VAS621001- Owner's Manual.



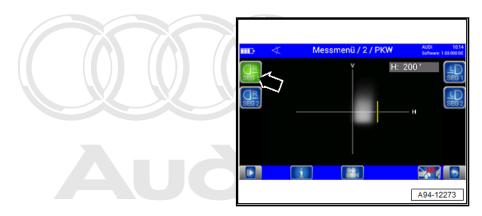
Check the parallel alignment of the Headlamp Adjusting Unit -VAS621001- to the vehicle transverse axis. To do so, align the laser beam of the Headlamp Adjusting Unit -VAS621001- to the left and right front fender bolts -arrows-.



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- Push the Headlamp Adjusting Unit -VAS621001 in front of correctness of information in this document. Copyright by AUDI AG. the right headlamp and check the parallel alignment again.
- Center the light collecting box lens to the headlamp reference segment.

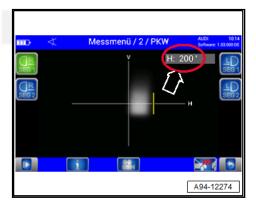


Shown on display:



- Press the button -arrow-. Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability
- Wait until the light measurement is complete these of information in this document. Copyright by AUDI AG.

Shown on display:



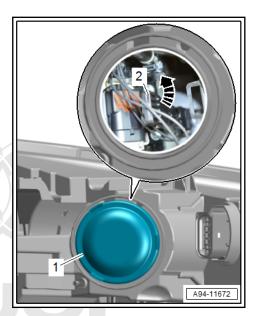
- The angle value of the inner reference segment edge is shown.
- Enter the angle value -arrow- of the inner reference segment edge in the Vehicle Diagnostic Tester. While doing so, pay attention to the sign if necessary.
- After completing the calibration, read the DTC memory and correct any existing faults.
- Left Front Turn Signal Bulb -M5-/Right 1.5 Front Turn Signal Bulb -M7-, Removing and Installing



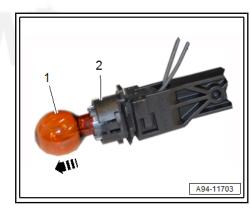
Note

This procedure description only refers to the HID headlamp.

- Switch off the ignition and all electrical equipment. Place the ignition key outside of the vehicle.
- Right front turn signal bulb on vehicles with TDI engine: Remove the fuel filter and move it to the side with the lines connected. Refer to ⇒ Rep. Gr. 20; Fuel Filter; Fuel Filter, Removing and Installing.
- Remove the housing cover -1-.



- Turn the bulb socket -2- counter-clockwise -arrow- and remove.
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- Remove the bulb -1- from the bulb socker especial the contents of information in this document. Copyright by AUDI AG. -arrow-.



Install in the reverse order of removal while noting the following:

- Install the new bulb. Be careful not to touch the bulb glass with bare hands.
- 1.6 **Bulb for Left Stationary Cornering** Lamp -M51-/Right Stationary Cornering Lamp -M52-, Removing and Installing

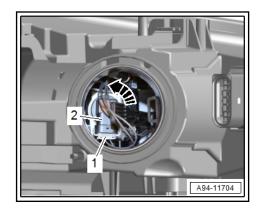


Note

This procedure description only refers to the HID headlamp.



Removing



- Remove the turn signal bulb. Refer to ⇒ F1.5 ront Turn Signal BulbM5/Right Front Turn Signal BulbM7, Removing and Installing", page 101.
- Release the stationary cornering lamp bulb -2- from the left headlamp by turning counter-clockwise -arrow- and from the right headlamp by turning clockwise.
- Remove the lamp.
- Disconnect the connector -1-.

Installing

Install in the reverse order of removal while noting the following:

- Insert the new bulb into the housing. Do not touch the bulb glass with bare hands.
- 1.7 Left HID Headlamp Bulb -L13-/Right HID Headlamp Bulb -L14- with Left HID Headlamp Control Module -J343-/-J344-, Removing and Installing

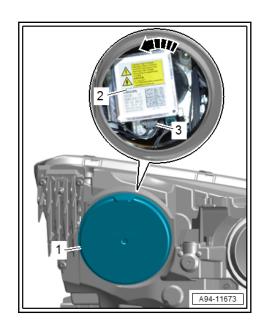


WARNING

High-voltage poses an extremely dangerous risk, a risk of injury and an environmental hazard.

♦ HID headlamp usage and safety precautions. Refer to ≥ H1.4 eadlamps Usage and Safety Precautions", page 2 .

- Turn the light switch to position "0".
- Switch off the ignition and all electrical equipment. Place the ignition key outside of the vehicle.
- Do not operate the flashers commercial purposes, in part or in whole, is not
- _ Loosen the front wheel housing liner in the front area and push it aside. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Front Wheel Housing Liner, Removing and Installing.
- Remove the housing cover -1-.



- Turn the HID headlamp bulb -2- counter-clockwise -arrowand remove it from the housing.
- Disconnect the connector -3-.

Install in the reverse order of removal while noting the following:

- Insert the new HID headlamp bulb into the housing. Do not touch the bulb glass with bare hands while doing so.
- Installation position: the electrical connection points downward.
- 1.8 Left Daytime Running Lamp and Position Lamp LED Module -L176-/Right **Daytime Running Lamp and Position** Lamp LED Moduler Led Vive a Removing G. AUDI AG does not guarantee or accept any liability rmation in this document. Copyright by AUDI AG. and Installing

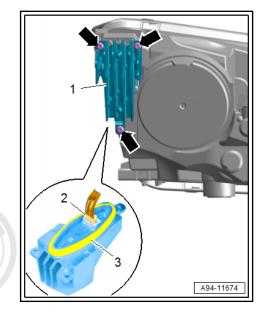


Note

This procedure description only refers to the HID headlamp.

- Turn the light switch to position "0".
- Switch off the ignition and all electrical equipment. Place the ignition key outside of the vehicle.
- Do not operate the flashers.
- Loosen the front wheel housing liner in the front area and push it aside. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Front Wheel Housing Liner, Removing and Installing.
- Remove the bolts -arrows-.





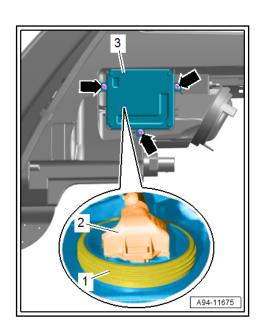
- Remove the LED module -1-.
- Disconnect the connector -2- and remove the LED module.

Install in the reverse order of removal while noting the following:

- Check the sealing rules and specifications

 Check the sealing rules and specification and specifications

 Check the sealing rules and specification and
- ◆ Refer to ⇒ -1.1.2 Headlamps, HID Headlamps", page 71
- 1.9 Left Daytime Running Lamp and Position Lamp Control Module -J860-/Right **Daytime Running Lamp and Position** Lamp Control Module -J861-, Removing and Installing



- Remove the front wheel spoiler. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview - Front Wheel Housing Liner.
- Remove the bolts -arrows-.
- Remove the daytime running lamp control module -3-.
- Press the release button and disconnect the connector -2-.

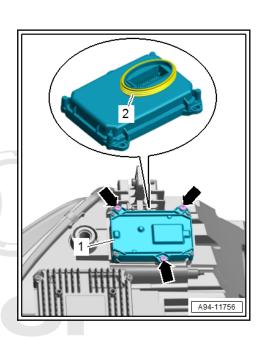
Install in the reverse order of removal while noting the following:

Check the seal -1- for damage.

Tightening Specifications

- ◆ Refer to ⇒ -1.1.2 Headlamps, HID Headlamps", page 71
- 1.10 Left Headlamp Power Output Module -J667-/Right Headlamp Power Output Module -J668-, Removing and Installing

Removing



- Remove the headlamp housing. Refer to ⇒ R1.2.1 emoving and Installing", page 75.
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Remove the bolts -arrows-. with respect to the correctness of information in this document. Copyright by AUDI AG.
- Remove the headlamp power output module -1-.

Installing

Install in reverse order of removal and note the following:

- Check the seal -2- for damage.

Tightening Specifications

- ◆ Refer to ⇒ -1.1.3 Headlamps, LED Headlamps", page 73
- 1.11 Left HID Headlamp Control Module -J343-/Right HID Headlamp Control



Module -J344-, Removing and Installing



Note

The Left HID Headlamp Bulb -L13-/Right HID Headlamp Bulb -L14- is integrated in the Left HID Headlamp Control Module -J343-/-J344-. The control module cannot be replaced separately if it is faulty. Remove the HID headlamp bulb. Refer to ⇒ H1.7 ID Headlamp BulbL13/Right HID Headlamp BulbL14 with Left HID Headlamp Control ModuleJ343/J344, Removing and Installing", page 103.

1.12 Headlamp Power Output Module, Removing and Installing

⇒ L1.12.1 ED Headlamp Power Output Module 1A27/Left LED Headlamp Power Output Module 1A31, Removing and Installing", page 107

⇒ L1.12.2 ED Headlamp Power Output Module 2A28/Left LED Headlamp Power Output Module 2A32, Removing and Installing", page 108

1.12.1 Right LED Headlamp Power Output Module 1 -A27-/Left LED Headlamp Power Output Module 1 -A31-, Removing and Installing

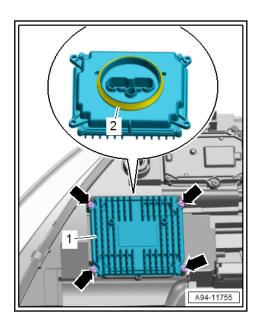
Removing

Remove the front wheel spoiler. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview - Front Wheel Housing Liner.

Vehicles with Auxiliary Radiator:

- Remove the front bumper cover prefer come Body Extension or in whole, is not Rep. Gr. 63, Front Bumper in Bumper Removing and by AUDI AG. Installing.
- Remove the auxiliary radiator air duct by pushing the air duct outward and removing it.

Continuation for All Vehicles:



- Remove the bolts -arrows-.
- Remove the control module -1-.

Installing

Install in the reverse order of removal while noting the following:

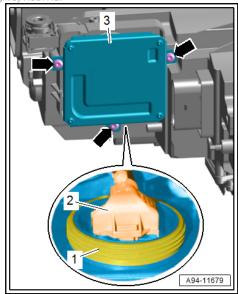
- Check the seal -2- for damage.

Tightening Specifications

- ◆ Refer to ⇒ -1.1.3 Headlamps, LED Headlamps", page 73
- Right LED Headlamp Power Output 1.12.2 Module 2 -A28-/Left LED Headlamp Power Output Module 2 -A32-, Removing and Installing

Removing

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- Left headlamp on vehicles with gasoline engine: remove the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Disconnect the connector from the headlamp.
- Remove the bolts -arrows-.
- Remove the power output module -3-.
- Press the release button and disconnect the connector -2-.
- Remove the power output module.

Install in reverse order of removal and note the following:

Check the seal -1- for damage.

Tightening Specifications

Refer to ⇒ -1.1.3 Headlamps, LED Headlamps", page 73

1.13 Headlamps, Changing from RHD to LHD (Not for North American Market) Protected by convincint Convince for private or commercial purposes, in part or in whole, is not

If the vehicle is driven in countries where the traffic drives on applied the other side of the road than where it is normally driven, no actions must be performed.

1.14 Headlamps, Changing from LHD to RHD (Not for North American Market)

If the vehicle is driven in countries where the traffic drives on the other side of the road than where it is normally driven, no actions must be performed.

2 Lamps in Exterior Rearview Mirror

- ⇒ -2.1 Lamps in Exterior Rearview Mirror", page 110
- ⇒ S2.2 ignal, Removing and Installing", page 111

2.1 Overview - Lamps in Exterior Rearview Mirror

1 - Bolt

- ☐ Tightening specification. Refer to ⇒ Body Exterior; Rep. Gr. 66; Exterior Rearview Mirror; Overview - Exterior Rearview Mirror.
- Quantity: 4

2 - Mirror Trim

3 - Bolt

- □ 0.9 Nm
- Quantity: 2

4 - Exterior Rearview Mirror Turn Signal

- With Driver Exterior Rearview Mirror Turn Signal Bulb -L131-
- With Front Passenger Exterior Rearview Mirror Turn Signal Bulb -L132-
- ☐ The entire exterior rearview mirror turn signal must be replaced if an LED is faulty.
- Removing and Installing. Refer to ⇒ S2.2 ignal, Removing and Installing", page 111
- 5 Mirror Cap
- 6 Exterior Rearview Mirror
- by copyright. Copying for 7 - Mirrore Glass nless authorised by AU with respect to the correctness of

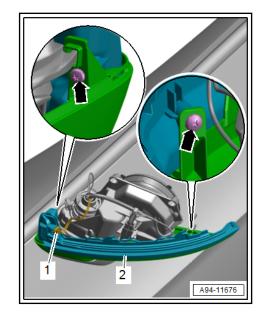
6 A94-11611





2.2 Turn Signal, Removing and Installing

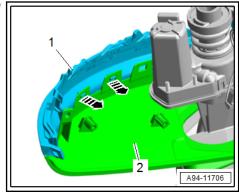
Removing



- Remove the mirror cap. Refer to ⇒ Body Exterior; Rep. Gr. 66; Exterior Rearview Mirror; Mirror Cap, Removing and Installing.
- Disconnect the connector -1- for the turn signal -2-.
- Remove the bolts -arrows-.
- Release the retainers in direction of -arrows- and remove the

turn signal -1- from the exterior rearview mirror -2-.

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Installing

Install in the reverse order of removal while noting the following:



Note

The entire exterior rearview mirror turn signal must be replaced if an LED is faulty.

Tightening Specifications

Refer to ⇒ -2.1 Lamps in Exterior Rearview Mirror", page <u>110</u>

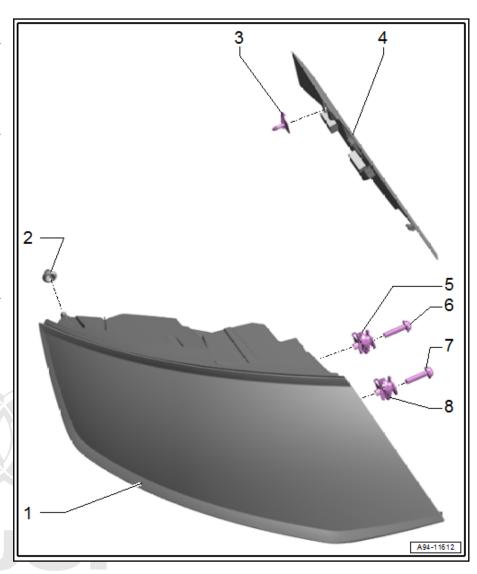
3 Tail Lamps

- ⇒ -3.1 Body Tail Lamps", page 112
- ⇒ T3.2 ail Lamp, Removing and Installing", page 112

3.1 Overview - Body Tail Lamps

1 - Tail Lamp

- ☐ There are different versions. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the allocation.
- □ Removing and Installing. Refer to ⇒ T3.2 ail Lamp, Removing and Installing", page 112
- 2 Clip Nut
 - Quantity: 2
- 3 Clip
- 4 Cover
 - ☐ For the tail lamp
 - □ Removing and Installing. Refer to ⇒ T3.2 ail Lamp, Removing and Installing", page 112.
- 5 Adjuster
- 6 Bolt
 - □ 3.5 Nm
- 7 Bolt
 - □ 3.5 Nm
- 8 Adjuster

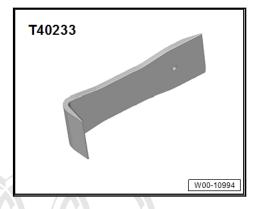


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Special tools and workshop equipment required



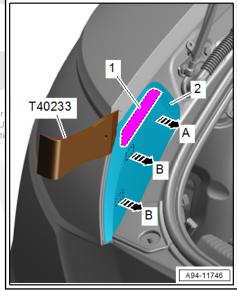
♦ Removal Wedge -T40233-



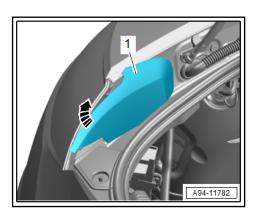
♦ Cleaning Solution -D 009 401 04-Removing



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- Turn the light switch to position "0".
- Carefully loosen the bonding -1- on the cover -2- from the side panel.
- Release the front retainer in direction of -arrow A-.
- Using the Removal Wedge -T40233-, release the retainers on the tail lamp in direction of -B arrows-.
- Remove the cover -1- from the tail lamp in direction of -arrow- as shown.

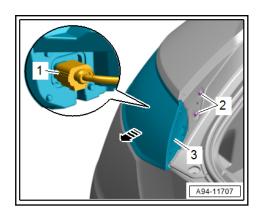




Note

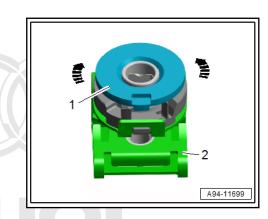
The cover must be removed very carefully so that the guide and the hooks do not get damaged.

- Remove the bolts -2-.



- Remove the tail lamp -3- from the clip nuts toward the rear in direction of -arrow-.
- Disconnect the connector -1- and free it up.

Installing



Install in the reverse order of removal while noting the following:



Note

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A damaged cover must be replaced.

- Clean the adhesive surface on the body with Cleaning Solution -D 009 401 04-.
- Check all of the adjusters -2- on the tail lamp. To do so, the adjusting nut -1- must be gently screwed on -arrows-.
- Screw the adjusting nuts all the way downward, but do not tighten.
- Bring the tail lamp into the installation position.
- Align the tail lamp with the side panel and tighten the bolts.
- The tail lamp must be flush with the side panel.





Note

Tightening the bolt automatically turns the adjusting nut on the adjuster towards the tail lamp mounting point and secures it.

Tightening Specifications

◆ Refer to ⇒ -3.1 Body Tail Lamps", page 112



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4 **High-Mounted Brake Lamp**

- ⇒ -4.1 High-Mounted Brake Lamp", page 116
- ⇒ B4.2 rake Lamp, Removing and Installing", page 116

4.1 Overview - High-Mounted Brake Lamp

1 - Nut

- □ 2.5 Nm
- Quantity: 2

2 - Seal

- □ Replace if damaged
- ☐ There are different versions. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- Quantity: 2

3 - Seal

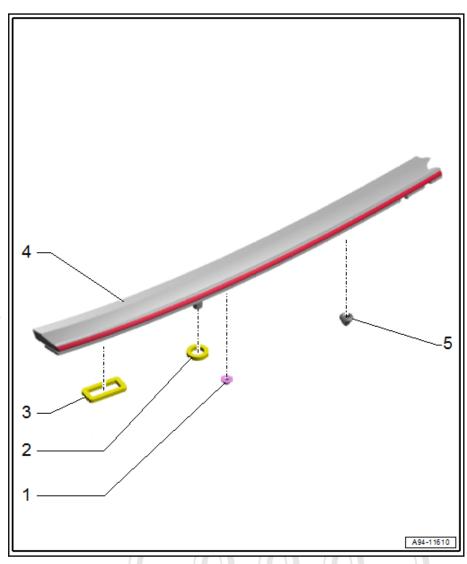
- □ Replace if damaged
- ☐ There are different versions. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- Quantity: 4

4 - High-Mounted Brake Lamp

- □ With High-Mounted Brake Lamp Bulb -M25-
- Removing and Installing. Refer to ⇒ B4.2 rake Lamp, Removing and Installing", page 116

5 - Grommet

- □ Replace if damaged
- Quantity: 4



High-Mounted Brake Lamp, Removing 4.2 and Installing

Special tools and workshop equipment required

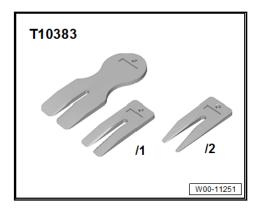


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Wedge Set -T10383-



Removing

- Electric spoiler: extend the spoiler. Refer to the ⇒ Vehicle Owner's Manual.
- Remove the rear lid lower trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Luggage Compartment Trim Panels; Rear Lid Lower Trim Panel, Removing and Installing.
- Fixed spoiler: remove the spoiler. Refer to ⇒ Body Exterior; Rep. Gr. 66; Spoiler; Spoiler, Removing and Installing.



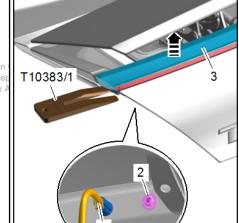
Note

Tape off the area around the high-mounted brake lamp with adhesive tape so that the paintwork does not get damaged.

- Disconnect the connector -1-.



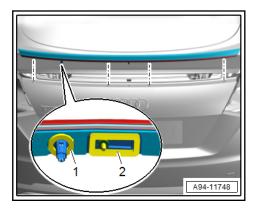
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- Remove the nuts -2-.
- Using the Wedge Set -T10383/1-, pry the high-mounted brake lamp -3- off of the rear lid in direction of -arrow-.



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Install in the reverse order of removal while noting the following:

- Check the seals -1 and 2- for damage.



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5 License Plate Lamp

The Left License Plate Lamp -X4- and Right License Plate Lamp -X5- are integrated in the grip piece. Cannot be replaced separately if faulty. Grip Piece, Replacing. Refer to \Rightarrow L2.17 id Lock Cylinder Unlock ButtonF248, Removing and Installing", page 196



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6 Access/Start Authorization

- ⇒ L6.1 ocation Overview Access/Start Authorization System", page 120
- ⇒ L6.2 ocation Overview Keyless Access Authorization System", page 121
- ⇒ -6.3 Exterior Door Handle for Keyless Access Authorization System", page 124
- ⇒ E6.4 xterior Door Handle Switch, Removing and Installing", page 124
- ⇒ A6.5 uthorization Control ModuleJ518, Removing and Instal-<u>ling", page 126</u>
- ⇒ A6.6 ccess/Start System Antenna 1 in Vehicle InteriorR138, Removing and Installing", page 130
- ⇒ S6.7 ystem Antenna in Luggage CompartmentR137, Removing and Installing", page 132
- ⇒ S6.8 ystem Antenna 2 in Vehicle InteriorR139, Removing and Installing", page 132 Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not ⇒ A6.9 ccess/Start System AntennaR134/Front Passer net of information in this document. Copyright by AUDI AG.

cess/Start System AntennaR135, Removing and Installing",

⇒ S6.10 ystem Antenna in Rear BumperR136, Removing and Installing", page 134

6.1 Component Location Overview - Access/Start Authorization System



1 - Electronic Steering Column Lock Control Module -J764-

Removing and Installing. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 48; Steering Column; Electronic Steering Column Lock Control Module -J764-, Removing and Installing

2 - Steering Column

3 - Bracket

For access/start authorization control module

4 - Access/Start Authorization Control Module -J518-

- Different component locations
- □ Removing and Installing. Refer to ⇒ A6.5 uthorization Control ModuleJ518, Removing and Installing", page 126.

5 - Anti-Theft Immobilizer Reader Coil -D2-

Removing and Installing. Refer to ⇒ 15.1 mmobilizer Reader Coil, Removing and Installing", page 204

6 - Access/Start Authorization Button -E408-

□ Removing and Installing. Refer to ⇒ A2.13 uthorization ButtonE408, Removing and Installing", page 193.

7 - Bracket

☐ For vehicle electrical system control module

8 - Vehicle Electrical System Control Module -J519-

- ☐ With Central Locking and Anti-Theft Alarm System Antenna -R47-
- ☐ Overview. Refer to <u>⇒ L2.1 ocation Overview Control Modules", page 242</u>.

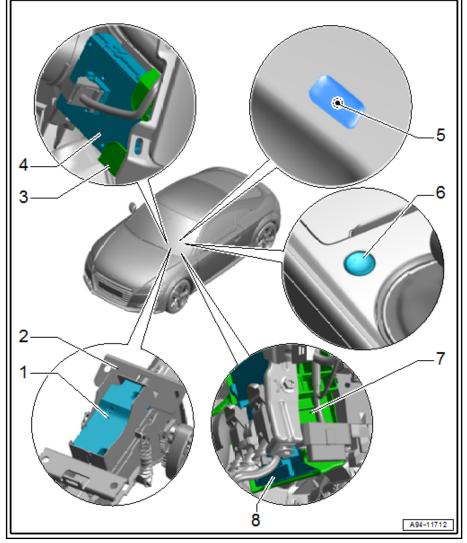
6.2 Component Location Overview - Keyless Access Authorization System

⇒ L6.2.1 ocation Overview - Front Keyless Access Authorization System", page 121

⇒ L6.2.2 ocation Overview - Rear Keyless Access Authorization System", page 123

6.2.1 Component Location Overview - Front Keyless Access Authorization Sys-

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1 - Vehicle Electrical System Control Module -J519-

- With Central Locking and Anti-Theft Alarm System Antenna -R47-
- □ Overview. Refer to ⇒ .2.1 ocation Overview -Control Modules", page

2 - Bracket

□ For vehicle electrical system control module

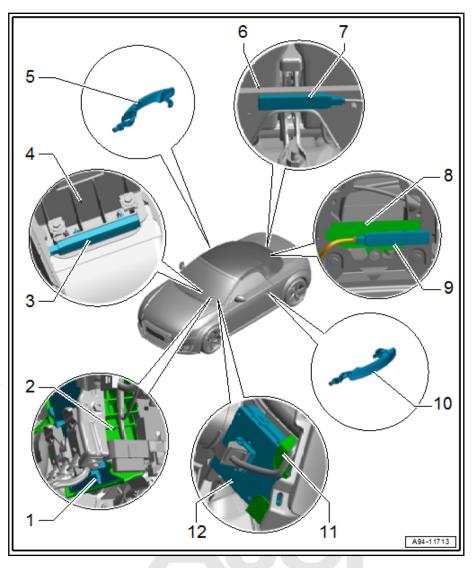
3 - Access/Start System Antenna 1 in Vehicle Interior -R138-

□ Removing and Installing. Refer to ⇒ A6.6 ccess/Start System Antenna 1 in Ve-hicle InteriorR138, Removing and Installing", page 130.

4 - Shift Mechanism

5 - Right Exterior Door Handle

- LHD: with Front Passenger Exterior Door Handle Touch Sensor -G416-
- ☐ RHD: with Driver Exterior Door Handle Touch Sensor -G415-
- □ Overview. Refer to ⇒ -6.3 Exterior Door Handle for Keyless Access Authorization System", page 124



6 - Body Reinforcements

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 - □ Removing and Installing. Refer to ⇒ S6.8 ystem Antenna 2 in Vehicle Interior R139, Removing and Installing", page 132

8 - Mount

☐ For the Access/Start System Antenna In Luggage Compartment -R137-

9 - Access/Start System Antenna In Luggage Compartment -R137-

- Only for Audi TT roadster
- □ Removing and Installing. Refer to ⇒ S6.7 ystem Antenna in Luggage CompartmentR137, Removing and Installing", page 132.

10 - Left Exterior Door Handle

- ☐ LHD: with Driver Exterior Door Handle Touch Sensor -G415-
- □ RHD: with Front Passenger Exterior Door Handle Touch Sensor -G416-
- Overview. Refer to ⇒ -6.3 Exterior Door Handle for Keyless Access Authorization System", page 124.

11 - Access/Start Authorization Control Module -J518-

- Different component locations
- □ Removing and Installing. Refer to ⇒ A6.5 uthorization Control Module J518, Removing and Installing", page 126.



12 - Bracket

For access/start authorization control module

6.2.2 Component Location Overview - Rear Keyless Access Authorization System

1 - Rear Bumper Cover

2 - Access/Start System Antenna in Rear Bumper -R136-

Removing and Installing. Refer to ⇒ S6.10 ystem Antenna in Rear BumperR136, Removing and Installing", page 134

3 - Left Access/Start System Antenna

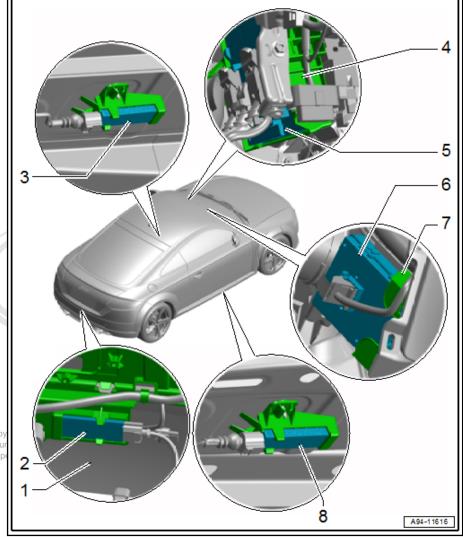
- □ LHD: Driver Access/Start System Antenna -R134-
- □ RHD: Front Passenger Access/Start System Antenna -R135-
- Removing and Installing. Refer to <u>⇒ A6.9 ccess/</u> Start System AntennaR134/Front Passenger Access/Start System AntennaR135, Removing and Installing", page 133.

4 - Bracket

□ For vehicle electrical system control module

5 - Vehicle Electrical System Control Module -J519-

- With Central Locking and Anti-Theft Alarm System Antenna -R47-
- Overview. Refer to ⇒ <u>L2.1 ocation Overview -</u> <u>Control Modules", page 242</u>.



6 - Access/Start Authorization Control Module -J518-

- Different component locations
- □ Removing and Installing. Refer to ⇒ A6.5 uthorization Control Module J518, Removing and Installing", page 126

7 - Bracket

□ For access/start authorization control module

8 - Right Access/Start System Antenna

- ☐ LHD: Front Passenger Access/Start System Antenna -R135-
- □ RHD: Driver Access/Start System Antenna -R134-
- Removing and Installing. Refer to <u>> A6.9 ccess/Start System AntennaR134/Front Passenger Ac-</u> cess/Start System AntennaR135, Removing and Installing", page 133.

Overview - Exterior Door Handle for Keyless Access Authorization Sys-6.3

1 - Exterior Door Handle **Touch Sensor**

- ☐ In the exterior door handle
- □ Driver Exterior Door Handle Touch Sensor -G415-, Front Passenger Exterior Door Handle Touch Sensor -G416-
- □ Removing and Installing. Refer to ⇒ E6.4 xterior Door Handle Switch, Removing and Installing", page <u> 124</u> .

2 - Anti-Theft Cover

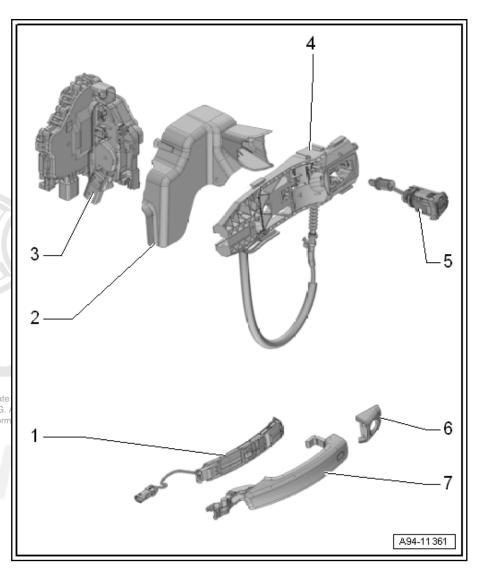
- ☐ For the door lock
- 3 Door Lock
- 4 Mounting Bracket

5 - Lock Cylinder

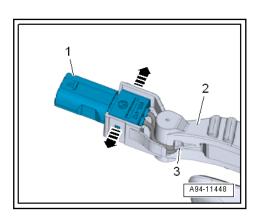
Only driver side

- 6 Cap Protected by copyright. Copying for private Dem Driver side for the Abok G w**cylinder**o t
 - ☐ Front passenger side, closed version

7 - Exterior Door Handle

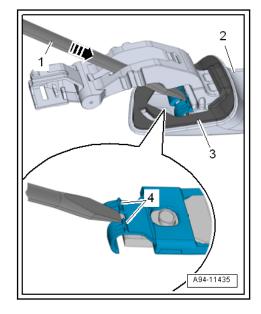


6.4 Front Exterior Door Handle Switch, Removing and Installing



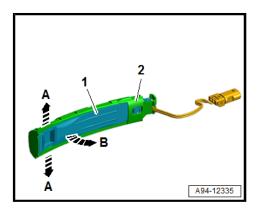


- Remove the door handle. Refer to ⇒ Body Exterior; Rep. Gr. 57; Door Components; Door Handle, Removing and Installing.
- Release the retaining tabs in direction of -arrows- and remove the connector -1- from the door handle -2-.
- Free up the wiring at the wiring guide -3-.
- Disengage the seal -3- and remove it.





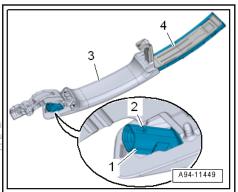
- Position a large stable screwdriver -1- on the exterior door handle -2- as shown.
- The screwdriver muss be positioned at the opening -4-.
- Remove the exterior door handle touch sensor forward out of the retainer on the exterior door handle using force in direction projected by copyright. Copying for private or commercial purposes, in part or in whole, is not perficitly unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability
- Remove the exterior door handle touch sensor from the han-
- Release the retainers in direction of -A arrows-.



Pivot the exterior door handle touch sensor -1- out of the bracket -2- in direction of -arrow B- and remove.



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Install in the reverse order of removal while noting the following:

- The connector -1- for the exterior door handle touch sensor -4- can only be inserted into the door handle -3- as shown.
- The tab -2- on the connector must point to the inside.
- 6.5 **Access/Start Authorization Control** Module -J518-, Removing and Instal-
- ⇒ A6.5.1 uthorization Control ModuleJ518, Removing and Installing", page 126
- ⇒ A6.5.2 uthorization Control ModuleJ518, Removing and Installing, RHD", page 128
- ⇒ A6.5.3 uthorization Control ModuleJ518, Removing and Installing, Market-Specific North America", page 129
- 6.5.1 Access/Start Authorization Control Module -J518-, Removing and Instal-



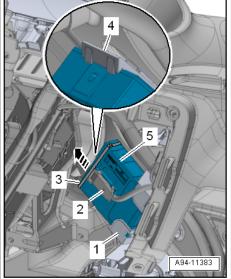
Note

If replacing the control module, select the "Replace control module" function for the corresponding control module on the ⇒ Vehicle diagnostic tester.

Removing



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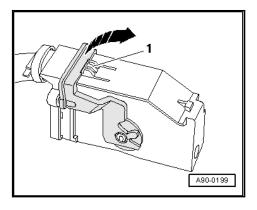
Remove the driver side instrument panel cover. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Driver Side Instrument Panel Cover, Removing and Installing.



Note

If the Access/Start Authorization Control Module -J518- is secured to the bracket with a cable tie -3-, the entire bracket must first be removed.

- Slide the mount -1- upward in direction of -arrow-. This disengages the retaining pins from the retaining plate.
- Release the retaining tab -4- and remove the control module -5- from the mount.
- Disconnect the connector -2-.
- To disconnect the connector, press the tab -1-, turn the retaining bracket in direction of -arrow- and remove the connector.



Installing

Install in reverse order of removal.

6.5.2 Access/Start Authorization Control Module -J518-, Removing and Installing, RHD

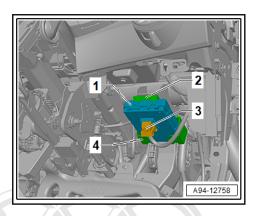


Note

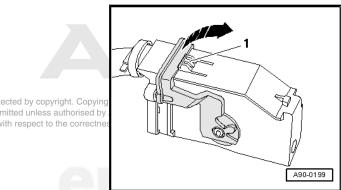
If replacing the control module, select the "Replace control module" function for the corresponding control module on the Vehicle Diagnostic Tester ⇒ Vehicle diagnostic tester.

Removing

- Remove the driver side instrument panel cover. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Driver Side Instrument Panel Cover, Removing and Installing.
- Release the retaining strap -2- from the mount -4-.



- Remove the control module -1- from the mount -4-.
- Disconnect the connector -3-.
- To disconnect the connector, press the tab -1-, turn the retaining bracket -arrow- and remove the connector.



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Installing

Install in reverse order of removal.



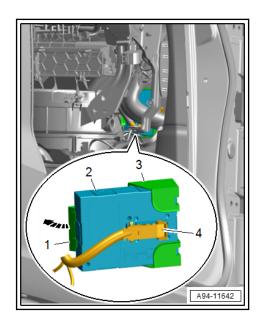
6.5.3 **Access/Start Authorization Control** Module -J518-, Removing and Installing, Market-Specific North America



Note

If replacing the control module, select the "Replace control module" function for the corresponding control module on the ⇒ Vehicle diagnostic tester.

Removing

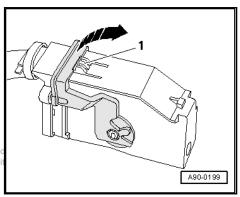


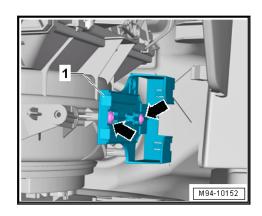
- Remove the glove compartment. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Glove Compartment, Removing and Installing.
- Open the tab -1- and remove the control module -2- from the mount -3- in direction of -arrow-.
- Disconnect the connector -4-.
- To disconnect the connector, press the tab -1-, turn the retaining bracket in direction of -arrow- and remove the connector.



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If necessary, remove the bolts -arrows- and remove the bracket -1-.





Install in reverse order of removal.

Tightening Specifications

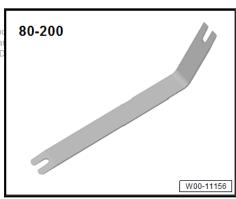
Component	Tightening Specification
Bracket to A/C unit	1.5 Nm

- 6.6 Access/Start System Antenna 1 in Vehicle Interior -R138-, Removing and Installing
- ⇒ A6.6.1 ccess/Start System Antenna 1 in Vehicle InteriorR138, Removing and Installing, Coupe", page 130
- ⇒ S6.6.2 ystem Antenna 1 in Vehicle InteriorR138, Removing and Installing, Roadster", page 131
- Access/Start System Antenna 1 in Ve-6.6.1 hicle Interior -R138-, Removing and Installing, Coupe

Special tools and workshop equipment required

♦ Pry Lever -80-200-

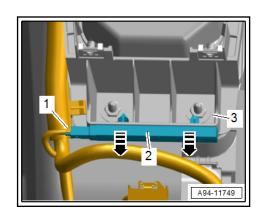
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Removing





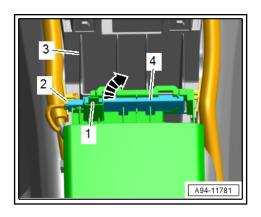
- Remove the center console. Refer to ⇒ Body Interior; Rep. Gr. 68; Center Console; Center Console, Removing and In- $\textbf{Stalling}_{\text{cl}} \text{ by copyright. Copying for private or commercial purposes, in part or in whole, is not}$
- permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Disconnector in 10-mation in this document. Copyright by AUDI AG.
- Using the Pry Lever -80-200-, pry the antenna -2- out of the mount -3- in direction of -arrows-.

Installing

Install in reverse order of removal.

6.6.2 Access/Start System Antenna 1 in Vehicle Interior -R138-, Removing and Installing, Roadster

Removing



- Remove the center console. Refer to ⇒ Body Interior; Rep. Gr. 68; Center Console; Center Console, Removing and Installing.
- Disconnect the connector -2-.
- Release the retainer -1-.
- Pivot the antenna -4- out of the mount -3- in direction of -arrow-.

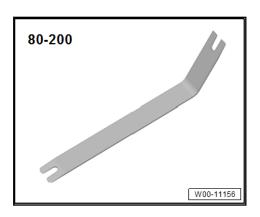
Installing

Install in reverse order of removal.

6.7 Access/Start System Antenna in Luggage Compartment -R137-, Removing and Installing

Special tools and workshop equipment required

♦ Pry Lever -80-200-

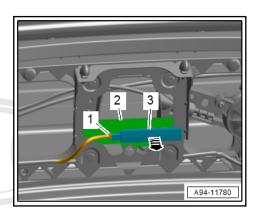




Note

This procedure applies only to the Audi TT Roadster.

Removing



- Convertible Top Compartment Front Trim Panel, Removing and Installing. Refer to ⇒ Body Interior; Rep. Gr. 70; Vehicle Interior Trim Panels.
- Disconnect the connector -1-.
- Using the Pry Lever -80-200-, pry the antenna -3- out of the Protected by copyright. Copyring for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability mount -2- in direction of -arrow-. with respect to the correctness of information in this document. Copyright by AUDI AG.

Installing

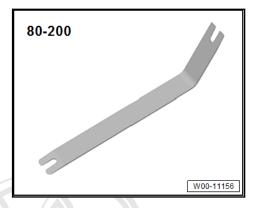
Install in reverse order of removal.

6.8 Access/Start System Antenna 2 in Vehicle Interior -R139-, Removing and Installing

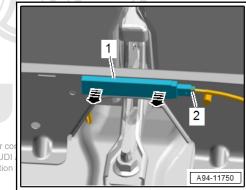
Special tools and workshop equipment required



Pry Lever -80-200-



Removing



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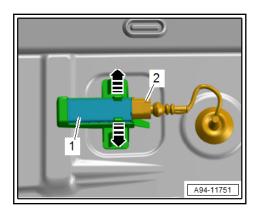
- Lift the luggage compartment floor by the handle and fold it forward.
- Disconnect the connector -2-.
- Using the Pry Lever -80-200-, pry the antenna -1- out of the body in direction of -arrows-.

Installing

Install in reverse order of removal.

6.9 **Driver Access/Start System Antenna** -R134-/Front Passenger Access/Start System Antenna -R135-, Removing and Installing

- Detach the center underbody trim panel at the side sill trim panel and push it slightly downward. Refer to ⇒ Body Exterior; Rep. Gr. 66; Underbody Trim Panel; Overview - Underbody Trim Panels.
- Disconnect the connector -2-.



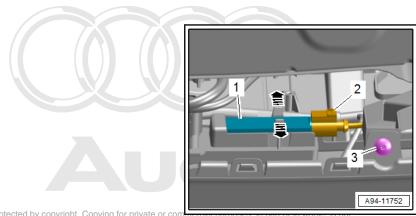
Release the retainers in direction of -arrows- and remove the antenna -1-.

Installing

Install in reverse order of removal.

6.10 Access/Start System Antenna in Rear Bumper -R136-, Removing and Installing

Removing



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- Reach behind the bumper cover and release the retainers in direction of -arrows-.
- Remove the antenna -1- and disconnect the connector -2-.

Installing

Install in reverse order of removal.

Tightening Specifications

Rear Bumper; Overview - Rear Bumper Cover. Refer to ⇒ Body Exterior; Rep. Gr. 63; Rear Bumper; Overview - Rear Bumper Cover.



7 **Steering Column Switch Module**

⇒ -7.1 Steering Column Switch Module", page 135

⇒ C7.2 olumn Switch Module, Removing and Installing", page 137

7.1 Overview - Steering Column Switch Module



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1 - Electronic Steering Column Lock Control Module -J764-

Removing and Installing. Refer to \Rightarrow Rep. Gr. 48; Steering Column; Electronic Steering Column Lock Control Module -J764-. Removing and Installing.

2 - Bolt

- ☐ Tightening Specification. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 48; Steering Column; Overview - Steering Column.
- Quantity: 3

3 - Bolt

- □ 10 Nm
- Quantity: 2

4 - Ignition Key

5 - Access/Start Authorization Button -E408-

Component Location Overview. Refer to ≥ 2.3 ocation Overview -Controls in Center Console", page 183

6 - Anti-Theft Immobilizer Reader Coil -D2-

Removing and Installing. Refer to ⇒ 15.1 mmobilizer Reader Coil, Removing and Installing", page 204.

8 9 A94-11615

6

7 - Transportation Protection

□ Remove before installing the steering wheel

8 - Steering Column Switch Module

- ☐ The following components are integrated in the steering column switch module:
- ◆ Turn Signal Switch -E2-
- Windshield Wiper Intermittent Mode Switch -E22-
- Cruise Control Switch -E45-
- Steering Column Electronics Control Module -J527-
- Airbag Spiral Spring/Return Spring with Slip Ring -F138-
 - ☐ The components cannot be replaced separately if faulty.
 - □ Removing and Installing. Refer to ⇒ C7.2 olumn Switch Module, Removing and Installing", page 137.

9 - Steering Column



7.2 Steering Column Switch Module, Removing and Installing



Note

If the steering column switch module is being replaced, select the "Replace Control Module" function for the respective control module on the ⇒ Vehicle diagnostic tester.

Removing

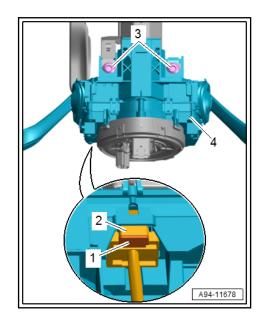
- Place the front wheels in a straight-ahead position steering wheel neutral position.
- Move the steering wheel as far to the rear and down as possible. Use the full steering column adjustment range for this.
- Remove the steering wheel. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 48; Steering Wheel; Steering Wheel, Removing and Installing.
- Remove the lower steering column trim panel. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments/Cov-or commercial purposes, in part or in whole, is not ers; Lower Steering Column Trim Panels Removing and Industrial Godes not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG. stalling.



WARNING

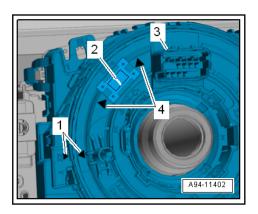
Risk of destroying electronic components with static discharge.

- ♦ Before disconnecting the connector, discharge static electricity from the body by touching a grounded vehicle component such as the door striker.
- Remove the connector lock -1-, press it down and disconnect the connector -2-.



Remove the bolts -3- and remove the steering column switch module -4-.

Installing



Install in the reverse order of removal while noting the following:

- The following must be checked on the steering column electronics control module -3- before sliding on the steering column switch module:
- The "arrows" -1- must align.
- The spiral spring -2- must be seen in the window between the "arrows" -4-.

Tightening Specifications

◆ Refer to <u>⇒ -7.1 Steering Column Switch Module</u>", page 135







Parking Aid 8

- ⇒ -8.1 Parking Aid", page 139
- ⇒ A8.2 id Control ModuleJ446, Removing and Installing", page 142
- ⇒ P8.3 arking Aid Warning BuzzerH22, Removing and Installing", page 144
- ⇒ P8.4 arking Aid Warning BuzzerH15, Removing and Installing", page 146
- ⇒ P8.5 arking Aid Sensor, Removing and Installing", page 147
- ⇒ P8.6 arking Aid Sensor, Removing and Installing", page 149
- 8.1 Overview - Parking Aid
- ⇒ -8.1.1 Front Parking Aid", page 139
- ⇒ -8.1.2 Rear Parking Aid", page 140

Overview - Front Parking Aid 8.1.1





1 - Right Front Center Parking Aid Sensor -G253-

Removing and Instal-P8.5 arking Aid Sensor, Removing and Installing", page 147

2 - Right Front Parking Aid Sensor -G252-

□ Removing and Installing. Refer to ⇒ P8.5 arking Aid Sensor, Removing and Installing", page 147

3 - Parking Aid Button -E266-

- Only for 8-channel parking aid
- Removing and Installed by ling. Refer to ⇒ i2e7mned ur Instrument Panel, Rerespo moving and Installing", page 188.

4 - Front Parking Aid Warning Buzzer -H22-

- Only for 8-channel parking aid
- Different component locations
- Removing and Installing. Refer to = P8.3 arking Aid Warning BuzzerH22, Removing and Installing", page 144.

5 - Bracket

☐ For the control module

6 - Parking Aid Control Module -J446-

- □ Different component locations
- ☐ RHD: outside on the pedal assembly mounting bracket
- □ Removing and Installing. Refer to ⇒ A8.2 id Control Module J446, Removing and Installing", page 142.

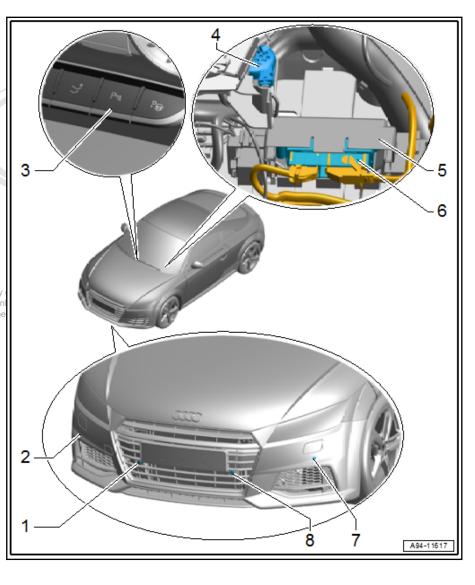
7 - Left Front Parking Aid Sensor -G255-

□ Removing and Installing. Refer to ⇒ P8.5 arking Aid Sensor, Removing and Installing", page 147.

8 - Left Front Center Parking Aid Sensor -G254-

□ Removing and Installing. Refer to ⇒ P8.5 arking Aid Sensor, Removing and Installing", page 147.

8.1.2 Overview - Rear Parking Aid





1 - Left Rear Parking Aid Sensor -G203-

Removing and Installing. Refer to ⇒ P8.6 arking Aid Sensor, Removing and Installing", page 149

2 - Left Rear Center Parking Aid Sensor -G204-

□ Removing and Installing. Refer to ⇒ P8.6 arking Aid Sensor, Removing and Installing", page 149

3 - Parking Aid Control Module -J446-

- ☐ Different component locations
- ☐ RHD: outside on the pedal assembly mounting bracket
- ☐ Removing and Installing. Refer to ⇒ A8.2 id Control ModuleJ446, Removing and Installing", page 142.

4 - Bracket

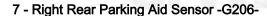
☐ For the control module

5 - Expanding Clip

☐ Quantity: 2

6 - Rear Parking Aid Warning Buzzer -H15-

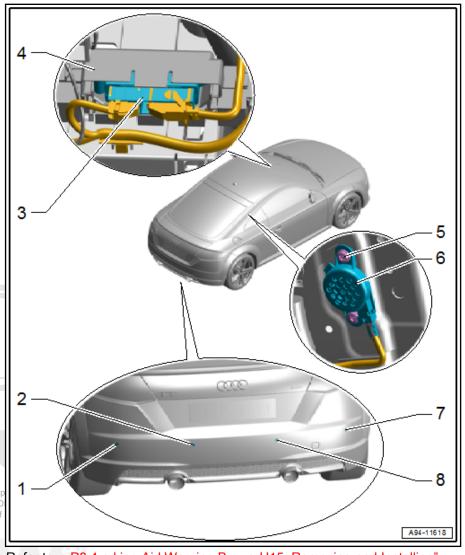
- pect to the correctr Different component locations
- ☐ Removing and Installing. Refer to ⇒ P8.4 arking Aid Warning BuzzerH15, Removing and Installing", page 146



□ Removing and Installing. Refer to ⇒ P8.6 arking Aid Sensor, Removing and Installing", page 149.

8 - Right Rear Center Parking Aid Sensor -G205-

□ Removing and Installing. Refer to ⇒ P8.6 arking Aid Sensor, Removing and Installing", page 149.



8.2 Parking Aid Control Module -J446-, Removing and Installing

⇒ A8.2.1 id Control ModuleJ446 Removing and Installing", page 142

⇒ P8.2.2 arking Aid Control ModuleJ446, Removing and Installing, RHD", page 143

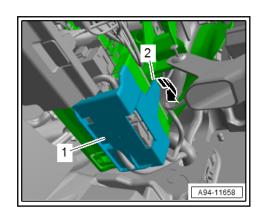
8.2.1 Parking Aid Control Module -J446- Removing and Installing



Note

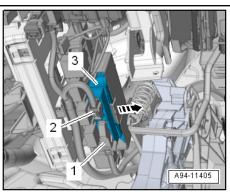
If replacing the control module, select the "Replace control module" function for the corresponding control module on the ⇒ Vehicle diagnostic tester.

Removing



- If equipped, release the retainer -2- in direction of -arrowand remove the cover -1- downward.
- North American market-specific: remove the driver side knee airbag. Refer to ⇒ Body Interior; Rep. Gr. 69; Knee Airbags; Knee Airbag with Igniter, Removing and Installing.
- Disconnect the connectors -1 and 2- by pressing the tab, turning the retaining bracket and disconnecting the connec-





Release the retainer in direction of -arrow- and remove the control module -3- downward from the bracket.

Installing

Install in reverse order of removal.



Parking Aid Control Module -J446-, 8.2.2 Removing and Installing, RHD



Note

If replacing the control module, select the "Replace control module" function for the corresponding control module on the Vehicle Diagnostic Tester ⇒ Vehicle diagnostic tester.

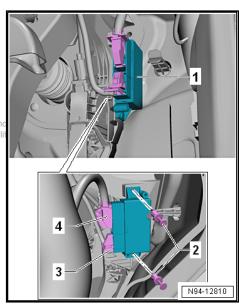
Removing

- Loosen the expanding clip -2- and remove.



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- Remove the Parking Aid Control Module -J446- -1-.
- Release and disconnect the connectors -3- and -4-.

Installing

Install in reverse order of removal.

8.3 Front Parking Aid Warning Buzzer - H22-, Removing and Installing

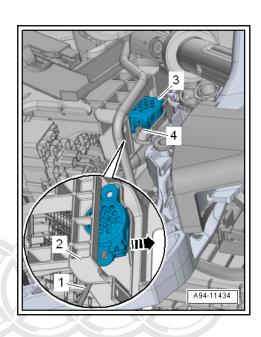
⇒ P8.3.1 arking Aid Warning BuzzerH22, Removing and Installing", page 144

⇒ P8.3.2 arking Aid Warning BuzzerH22, Removing and Installing, RHD, Coupe", page 144

⇒ F8.3.3 ront Parking Aid Warning BuzzerH22, Removing and Installing, RHD, Roadster", page 145

8.3.1 Front Parking Aid Warning Buzzer - H22-, Removing and Installing

Removing



- North American market-specific: remove the driver side knee airbag. Refer to ⇒ Body Interior; Rep. Gr. 69; Knee Airbags; Knee Airbag with Igniter, Removing and Installing.
- Remove the driver side instrument panel cover. Refer to
 ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and
 Covers; Driver Side Instrument Panel Cover, Removing and
 Installing.
- Push the buzzer -3- out of the mount -2- using a permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Remove the front parking aid warning buzzer.
- Disconnect the connector -4-.

Installing

Install in reverse order of removal.

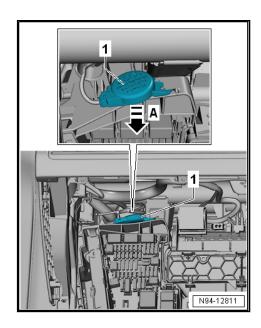
8.3.2 Front Parking Aid Warning Buzzer - H22-, Removing and Installing, RHD, Coupe

Removing

 Remove the glove compartment. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Glove Compartment, Removing and Installing.



Using a narrow screwdriver, remove the Front Parking Aid Warning Buzzer -H22- -1- from the mount in the direction of the arrow -A-.



- Remove the Front Parking Aid Warning Buzzer -H22- -1-.
- Disconnect the connector.

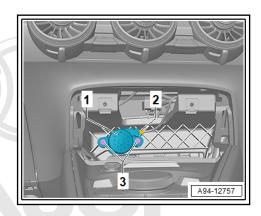
Installing

Install in reverse order of removal.

Front Parking Aid Warning Buzzer -8.3.3 H22-, Removing and Installing, RHD, Roadster

Removing

- Remove the Center Instrument Panel Switch Module -EX22trim. Refer to ⇒ Body Interior; Rep. Gr. 70; Instrument Panel; Overview - Instrument Panel.
- Remove the expanding rivets -3-.



- Remove the Front Parking Aid Warning Buzzer -H22- -1-.
- Disconnect the connector -2-.

Installing

Install in reverse order of removal.

8.4 Rear Parking Aid Warning Buzzer -H15-, Removing and Installing

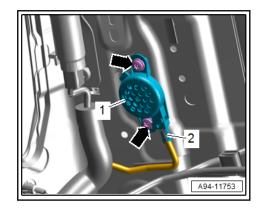
⇒ P8.4.1 arking Aid Warning BuzzerH15, Removing and Installing, Coupe", page 146

⇒ P8.4.2 arking Aid Warning BuzzerH15, Removing and Installing, Roadster", page 146

8.4.1 Rear Parking Aid Warning Buzzer -H15-, Removing and Installing, Coupe

Removing

- Remove the C-pillar trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Vehicle Interior Trim Panels; C-Pillar Trim Panel, Removing and installing permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability and the document. Conviright by AUDI AG. Remove the bolts -with respect to the correctness of information in this document. Copyright by AUDI AG.



- Remove the rear parking aid warning buzzer -1- with the expanding clips.
- Disconnect the connector -2-.

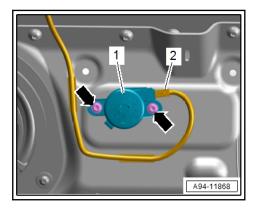
Installing

Install in reverse order of removal.

8.4.2 Rear Parking Aid Warning Buzzer -H15-, Removing and Installing, Roadster

Removing

Remove the right rear panel trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Vehicle Interior Trim Panels; Component Location Overview - Vehicle Interior Trim Panels.



Remove the bolts -arrows-.



- Remove the rear parking aid warning buzzer -1- with the expanding clips.
- Disconnect the connector -2-.

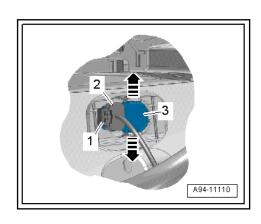
Installing

Install in reverse order of removal.

Front Parking Aid Sensor, Removing 8.5 and Installing

- ⇒ P8.5.1 arking Aid Sensor, Removing and Installing, Vehicles without Auxiliary Radiator", page 147
- ⇒ P8.5.2 arking Aid Sensor, Removing and Installing, Vehicles with Auxiliary Radiator", page 148
- 8.5.1 Front Parking Aid Sensor, Removing and Installing, Vehicles without Auxiliary Radiator

Removing



Exterior Sensors:

- Remove the front wheel spoiler. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview - Front Wheel Housing Liner.
- If installed, remove the headlamp washer system spray nozzle and move it to the side with the washer fluid hose still attached. Refer to ⇒ N3.3 ozzles, Removing and Installing", page 67
- Press both retainers to the side in direction of -arrows- and at the same time, push the sensor -3- through from the outside toward the inside.
- Disconnect the connector -2- by sliding the retainer -1- back and pressing the release down.

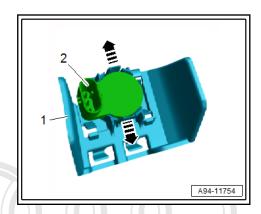
Inner Sensor, Vehicles through MY 2018:

Prote Remove the parking aid sensor mount. Refer to ⇒ Body not pernExterior; aRepseGry 66; Radiator Grille/Front-Trim; Radiatory w Grille: Removing and Installing his document. Copyright by AUDI AG

Inner Sensor, Vehicles from MY 2019:

- Remove the bumper cover end plate. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Overview - Bumper Cover.
- Disconnect the connector.

Continuation for All:



Press both retainers to the side in direction of -arrows- and remove the sensor -2- from the mount -1- at the same time.

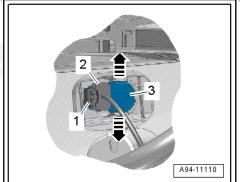
Installing

Install in reverse order of removal.

8.5.2 Front Parking Aid Sensor, Removing and Installing, Vehicles with Auxiliary Radiator

Removing

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Exterior Sensors:

- Remove the front bumper cover. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Bumper Cover, Removing and
- Press both retainers to the side in direction of -arrows- and at the same time, push the sensor -3- through from the outside toward the inside.
- Disconnect the connector -2- by sliding the retainer -1- back and pressing the release down.

Inner Sensor, Vehicles through MY 2018:

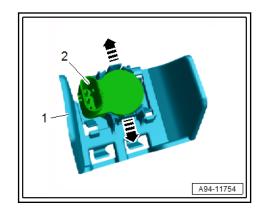
Remove the parking aid sensor mount. Refer to ⇒ Body Exterior; Rep. Gr. 66; Radiator Grille/Front Trim; Radiator Grille, Removing and Installing.

Inner Sensor, Vehicles from MY 2019:

- Remove the bumper cover end plate. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Overview - Bumper Cover.
- Disconnect the connector.



Continuation for All:



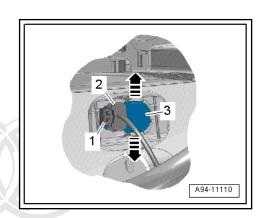
Press both retainers to the side in direction of -arrows- and remove the sensor -2- from the mount -1- at the same time.

Installing

Install in reverse order of removal.

Rear Parking Aid Sensor, Removing 8.6 and Installing

Removing



- Release the retainers in direction of -arrows- from below.
- Push the sensor -3- through from the outside toward the inside and remove it.
- Disconnect the connector -2- by sliding the retainer -1- back and pressing the release down.



9 Parallel Parking Assist

- ⇒ -9.1 Parallel Parking Assist", page 150
- ⇒ S9.2 ensor, Removing and Installing", page 151
- ⇒ S9.3 ensor, Removing and Installing", page 151

9.1 Overview - Parallel Parking Assist

1 - Left Front Parallel Parking Assistance Sensor -G568-

□ Removing and Installing. Refer to ⇒ S9.2 ensor, Removing and Installing", page <u> 151</u>

2 - Right Front Parallel Parking Assistance Sensor -G569-

□ Removing and Installing. Refer to ⇒ S9.2 ensor, Removing and Installing", page

3 - Parallel Parking Assistance Button -E581-

Removing and Installing. Refer to ⇒ i2.7 n Instrument Panel, Removing and Installing", page 188 .

4 - Right Rear Parallel Parking Assistance Sensor -G717-

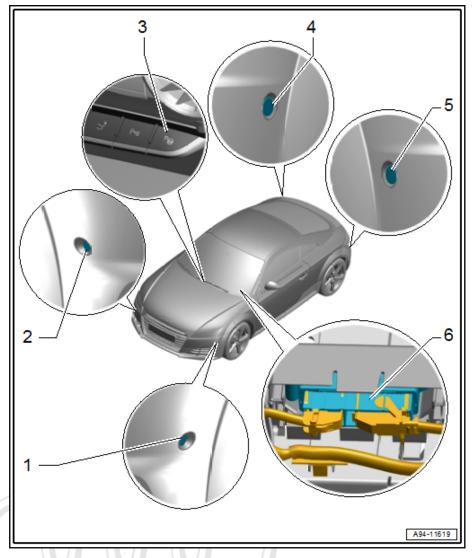
Removing and Installing. Refer to ⇒ S9.3 ensor, Removing and Installing", page <u>151</u> .

5 - Left Rear Parallel Parking Assistance Sensor -G716-

Removing and Installing. Refer to ⇒ S9.3 ensor, Removing and Installing", page 151.

6 - Parallel Parking Assistance Control Module -J791-

- ☐ Integrated in the Parking Aid Control Module -J446-
- □ Removing and Installing. Refer to ⇒ A8.2 id Control ModuleJ446, Removing and Installing", page 142.

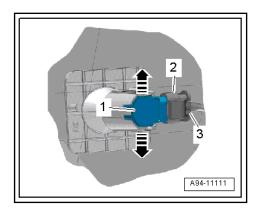






9.2 Front Sensor, Removing and Installing

Removing



- Detach the front wheel housing liner at the bottom and near the bumper and push it aside. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Front Wheel Housing Liner, Removing and Installing.
- Press both retainers to the side in direction of -arrows- and at the same time, push the sensor -1- through from the outside toward the inside.
- Disconnect the connector -2- by sliding the retainer -3- toward the rear and pressing the release down.

Installing

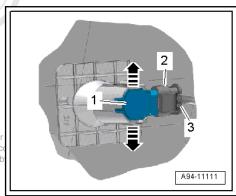
Install in reverse order of removal.

9.3 Rear Sensor, Removing and Installing

Removing



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- Detach the rear wheel housing liner near the bumper and push it aside. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Rear Wheel Housing Liner, Removing and Installing.
- Press both retainers to the side in direction of -arrows- and at the same time, push the sensor -1- through from the outside toward the inside.
- Disconnect the connector -2- by sliding the retainer -3- toward the rear and pressing the release down.

Installing

Install in reverse order of removal.

10 Automatic Headlamp Range Control

⇒ -10.1 Automatic Headlamp Range Control", page 152

⇒ R10.2 ange Control Module, Removing and Installing", page

10.1 Overview - Automatic Headlamp Range Control

1 - Left Front Level Control System Sensor -G78-

- □ Component location: on the front control arm
- Overview. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 43; Level Control System Sensor.

2 - Left Headlamp Beam Adjustment Motor -V48-

- Integrated in the headlamp Cannot be replaced separately if faulty.
- ☐ Headlamp, Replacing. Refer to ⇒ R1.2 emoving and Installing", page 75

3 - Right Headlamp Beam Adjustment Motor -V49-

- Integrated in the headlamp Cannot be replaced separately if faulty.
- □ Headlamp, Replacing. Refer to ⇒ R1.2 emoving and Installing", <u>page 75</u> .

4 - Connector

5 - Headlamp Range Control Module -J431-

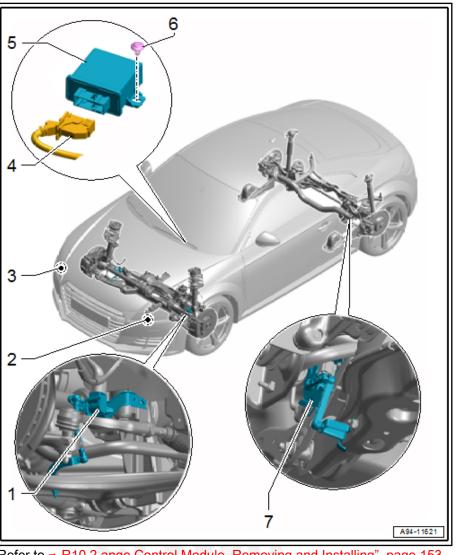
- □ RHD: outside on the pedal assembly mounting bracket
- □ Removing and Installing. Refer to ⇒ R10.2 ange Control Module, Removing and Installing", page

6 - Expanding Clip

Quantity: 2

7 - Left Rear Level Control System Sensor -G76-

- ☐ Component location: on the rear control arm
- □ Overview. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 43; Level Control System Sensor.





10.2 Headlamp Range Control Module, Removing and Installing

⇒ R10.2.1 ange Control Module, Removing and Installing", page 153

⇒ R10.2.2 ange Control Module, Removing and Installing, RHD", page 154

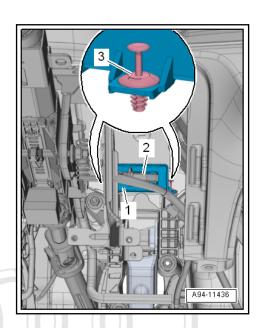
10.2.1 Headlamp Range Control Module, Removing and Installing



Note

If replacing the control module, select the "Replace control module" function for the corresponding control module on the ⇒ Vehicle diagnostic tester.

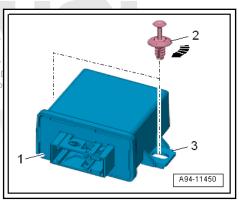
Removing



- Disconnect the connector -2- by pressing the tab, turning the retaining bracket and removing the connector.
- Remove the expanding clip -3- and remove the headlamp range control module -1- to the rear.

Installing





Install in the reverse order of removal while noting the following:

Insert the expanding clip -2- into the opening -3- on the control module -1- as shown and turn 90° to lock it -arrow-.

10.2.2 Headlamp Range Control Module, Removing and Installing, RHD



Note

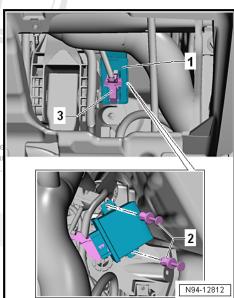
If replacing the control module, select the "Replace control module" function for the corresponding control module on the Vehicle Diagnostic Tester ⇒ Vehicle diagnostic tester.

Removing

- Remove the driver side instrument panel cover. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Driver Side Instrument Panel Cover, Removing and Installing.
- Remove the expanding clip -2-.



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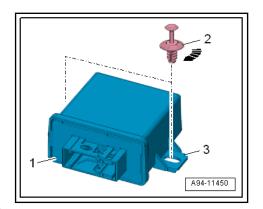
- Remove the headlamp range control module -1- toward the
- Disconnect the connector -3- by pressing the tab, turning the retaining bracket and removing the connector.

Installing

Install in the reverse order of removal while noting the following:

Insert the expanding clip -2- into the opening -3- on the control module -1-.





- Lock the expanding clip by turning 90° -arrow-.





Interior Lights, Switches 96 -

Lamps

- ⇒ L1.1 ocation Overview Instrument Panel Lamps", page 156
- ⇒ L1.2 ocation Overview Front Door Lamps", page 157
- ⇒ L1.3 ocation Overview Door Ambient Lighting", page 159
- ⇒ L1.4 ocation Overview Center Console Lamps", page 161
- ⇒ L1.5 ocation Overview Luggage Compartment Lamps", page 161
- ⇒ L1.6 ocation Overview Roof Trim Panel Lamps", page 162
- ⇒ C1.7 ompartment LampW6, Removing and Installing", page 164
- ⇒ f1.8 or Glove Compartment LampW6, Replacing", page 164
- ⇒ F1.9 ront Footwell Illumination BulbL151/Right Front Footwell Illumination BulbL152, Removing and Installing", page 165
- ⇒ L1.10 ocking -Safe- Indicator LampK133, Removing and Installing", page 166
- ⇒ S1.11 ide Entry LampW92/Passenger Side Entry LampW93, Removing and Installing", page 166
- ⇒ D1.12 oor Warning LampW30/Front Passenger Door Warning mercial purposes, in part or in whole, is not LampW36, Removing and Installing and page 167 lised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- ⇒ S1.13 ide Interior Door Handle Illumination LampL219/Passenger Side Interior Door Handle Illumination LampL220, Removing and Installing", page 168
- ⇒ D1.14 oor Storage Compartment Illumination BulbL160/Front Passenger Door Storage Compartment Illumination BulbL161, Removing and Installing", page 169
- ⇒ S1.15 ide Door Ambient Lighting LampW86/Passenger Side Door Ambient Lighting LampW87, Removing and Installing", page 170
- ⇒ C1.16 ompartment Illumination BulbL120, Removing and Installing", page 173
- ⇒ L1.17 ever Transmission Range Position Display UnitY26, Removing and Installing", page 174
- ⇒ C1.18 enter Console Ambient Lighting Bulb 1L193/Front Center Console Ambient Lighting Bulb 2L194, Removing and Instal-
- ⇒ C1.19 ompartment Lamp, Removing and Installing", page 176
- ⇒ V1.20 anity Mirror LampW20/Front Passenger Vanity Mirror LampW14, Removing and Installing", page 177
- 1.1 Component Location Overview - Instrument Panel Lamps



1 - Right Front Footwell Illumination Bulb -L152-

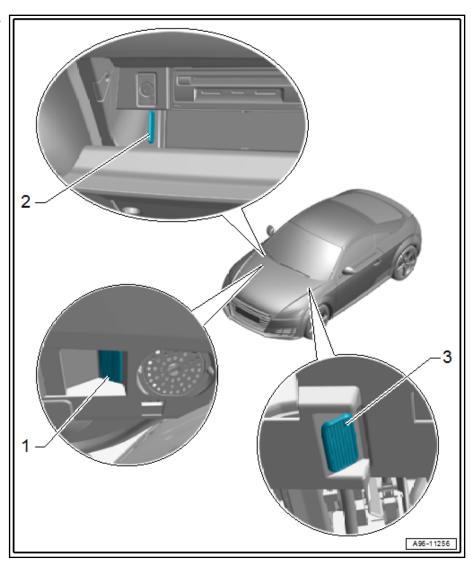
Removing and Installing. Refer to ⇒ F1.9 ront Footwell Illumination BulbL 151/ Right Front Footwell Illumination BulbL152, Removing and Installing", page 165.

2 - Glove Compartment Lamp -W6-

- □ 12 V, 5 W
- ☐ Removing and Installing. Refer to ⇒ C1.7 ompartment LampW6, Removing and Installing", page <u> 164</u> .
- ☐ RHD: is a mirror image

3 - Left Front Footwell Illumination Bulb -L151-

□ Removing and Installing. Refer to ⇒ F1.9 ront Footwell Illumination BulbL151/ Right Front Footwell Illumination BulbL152, Removing and Installing", page 165.



Component Location Overview - Front Door Lamps 1.2



1 - Left Door Entry Lamp

- Removing and Installing. Refer to S1.11 ide Entry LampW92/Passenger <u>Side Entry LampW93,</u> Removing and Instal-<u>ling", page 166</u>
- ☐ LHD: Driver Side Entry Lamp -W92-
- □ RHD: Passenger Side Entry Lamp -W93-

2 - Left Door Storage Compartment Illumination Bulb

- Removing and Installing. Refer to ⇒ D1.14 oor Storage Compartment Illumination BulbL160/Front Passenger Door Storage Compartment Illumination BulbL161, Repro moving and Installing", pe page 169
- □ LHD: Driver Door Storage Compartment Illumination Bulb -L160-
- RHD: Front Passenger Door Storage Compartment Illumination Bulb -L161-

3 - Left Door Warning Lamp

- □ For vehicles through MY 2017
- Removing and Installing. Refer to ⇒ D1.12 oor Warning

(3) 8 2 9 A96-11257 LampW30/Front Passenger Door Warning LampW36, Removing and Installing", page 167.

- ☐ LHD: Driver Door Warning Lamp W30-
- ☐ RHD: Front Passenger Door Warning Lamp -W36-
- □ 12 V, 3 W

Left Door Warning Reflector

☐ For vehicles from MY 2018

4 - Right Door Entry Lamp

- □ Removing and Installing. Refer to ⇒ S1.11 ide Entry LampW92/Passenger Side Entry LampW93, Removing and Installing", page 166.
- ☐ LHD: Passenger Side Entry Lamp -W93-
- □ RHD: Driver Side Entry Lamp -W92-

5 - Right Door Storage Compartment Illumination Bulb

- Removing and Installing. Refer to \Rightarrow D1.14 oor Storage Compartment Illumination BulbL160/Front Passenger Door Storage Compartment Illumination BulbL161, Removing and Installing", page 169 .
- ☐ LHD: Front Passenger Door Storage Compartment Illumination Bulb -L161-
- ☐ RHD: Driver Door Storage Compartment Illumination Bulb -L160-

6 - Right Interior Door Handle Illumination Lamp

☐ Removing and Installing. Refer to ⇒ S1.13 ide Interior Door Handle Illumination LampL219/Passenger Side Interior Door Handle Illumination LampL220, Removing and Installing", page 168.



	LHD: Passenger Side Interior Door Handle Illumination Lamp -L220-
_	RHD: Driver Side Interior Door Handle Illumination Lamp -L219- por Warning Lamp/Door Warning Reflector
	For vehicles through MY 2017
	LHD: Front Passenger Door Warning Lamp -W36-
_	RHD: Driver Door Warning Lamp -W30-
	12 V, 3 W
	Removing and Installing. Refer to <u>⇒ D1.12 oor Warning LampW30/Front Passenger Door Warning LampW36, Removing and Installing", page 167</u> .
Right Door Warning Reflector	
	For vehicles from MY 2018
8 - Central Locking -Safe- Indicator Lamp -K133-	
	Removing and Installing. Refer to <u>⇒ L1.10 ocking -Safe- Indicator LampK133, Removing and Installing", page 166</u> .
	RHD is a mirror image
9 - Left Interior Door Handle Illumination Lamp	
	Removing and Installing. Refer to ⇒ S1.13 ide Interior Door Handle Illumination LampL219/Passenger Side Interior Door Handle Illumination LampL220, Removing and Installing", page 168.
	LHD: Driver Side Interior Door Handle Illumination Lamp -L219-

1.3 **Component Location Overview - Door Ambient Lighting**

☐ RHD: Passenger Side Interior Door Handle Illumination Lamp -L220-





1 - Left Door Ambient Lighting Lamp

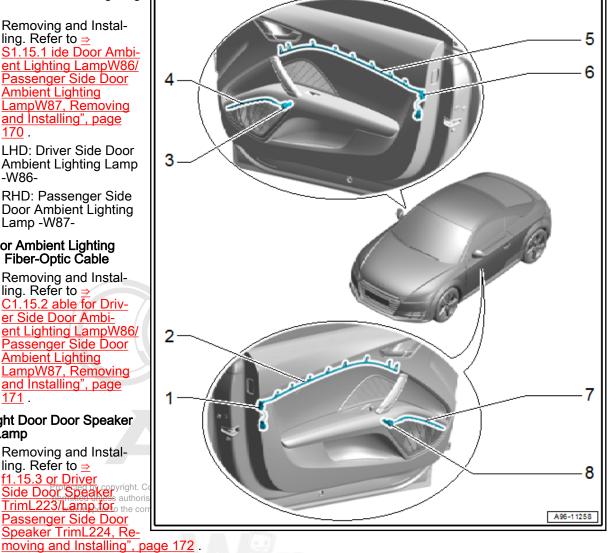
- Removing and Installing. Refer to ⇒ S1.15.1 ide Door Ambi-<u>ent Lighting LampW86/</u> Passenger Side Door Ambient Lighting LampW87, Removing and Installing", page 170 .
- ☐ LHD: Driver Side Door Ambient Lighting Lamp -W86-
- □ RHD: Passenger Side **Door Ambient Lighting** Lamp -W87-

2 - Door Ambient Lighting Lamp, Fiber-Optic Cable

□ Removing and Installing. Refer to C1.15.2 able for Driver Side Door Ambient Lighting LampW86/ Passenger Side Door Ambient Lighting LampW87, Removing and Installing", page 171

3 - Right Door Door Speaker Trim Lamp

Removing and Installing. Refer to ⇒ f1.15.3 or Driver Side Door Speakers authoris TrimL223/Lamp for the con Passenger Side Door Speaker TrimL224, Re-



- ☐ LHD: Lamp for Passenger Side Door Speaker Trim -L224-
- □ RHD: Lamp for Driver Side Door Speaker Trim -L223-

4 - Door Speaker Trim Lamp, Fiber-Optic Cable

□ In the speaker trim

5 - Door Ambient Lighting Lamp, Fiber-Optic Cable

□ Removing and Installing. Refer to ⇒ C1.15.2 able for Driver Side Door Ambient Lighting LampW86/ Passenger Side Door Ambient Lighting LampW87, Removing and Installing", page 171.

6 - Right Door Ambient Lighting Lamp

- □ Removing and Installing. Refer to ⇒ S1.15.1 ide Door Ambient Lighting LampW86/Passenger Side Door Ambient Lighting LampW87, Removing and Installing", page 170.
- ☐ LHD: Passenger Side Door Ambient Lighting Lamp -W87-
- □ RHD: Driver Side Door Ambient Lighting Lamp -W86-

7 - Door Speaker Trim Lamp, Fiber-Optic Cable

In the speaker trim

8 - Left Door Door Speaker Trim Lamp

- □ Removing and Installing. Refer to ⇒ f1.15.3 or Driver Side Door Speaker TrimL223/Lamp for Passenger Side Door Speaker TrimL224, Removing and Installing", page 172.
- ☐ LHD: Lamp for Driver Side Door Speaker Trim -L223-



☐ RHD: Lamp for Passenger Side Door Speaker Trim -L224-

1.4 Component Location Overview - Center Console Lamps

1 - Multimedia System Control Head Contour Illumination Lamp 1 -L233-

☐ If an LED is faulty, then the multimedia system control head must be replaced

2 - Selector Lever Transmission Range Position Display Unit -Y26-

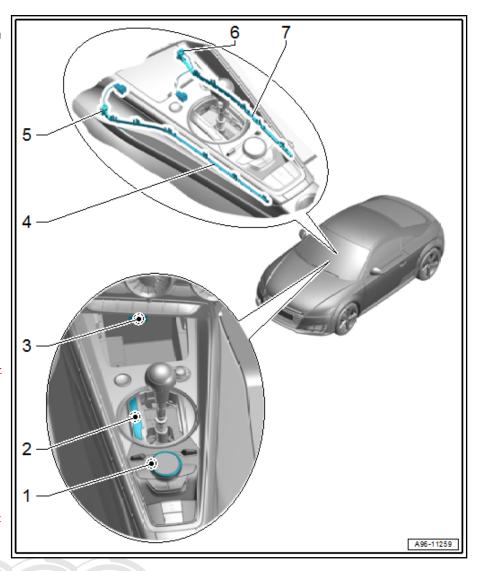
- Removing and Installing. Refer to ⇒ L1.17 ever Transmission Range Position Display UnitY26, Removing and Installing", page 174
- ☐ RHD: is a mirror image

3 - Storage Compartment Illumination Bulb -L120-

Removing and Installing. Refer to ⇒ C1.16 ompartment Illumination BulbL120, Removing and Installing", page 173.

4 - Fiber-Optic Cable for Ambient Lighting Lamp

□ Removing and Installing. Refer to = C1.18.2 enter Console Ambient Lighting Bulb 1L193/Front Center Console Ambient Lighting Bulb 2L194, Removing and Installing", page 175.



5 - Front Center Console Ambient Lighting Bulb 1 -L193-

Removing and Installing. Refer to ⇒ C1.18 enter Console Ambient Lighting Bulb 1L193/Front Center Console Ambient Lighting Bulb 2L 194, Removing and Installing", page 174.

6 - Front Center Console Ambient Lighting Bulb 2 -L194-

Removing and Installing. Refer to ⇒ C1.18 enter Console Ambient Lighting Bulb 1L193/Front Center Console Ambient Lighting Bulb 2L194, Removing and Installing", page 174.

7 - Fiber-Optic Cable for Ambient Lighting Lamp

Removing and Installing. Refer to ⇒ C1.18.2 enter Console Ambient Lighting Bulb 1L193/Front Center Console Ambient Lighting Bulb 2L 194, Removing and Installing", page 175.

1.5 rotected by corright Copying for private or compercial Opposes in part or in whole is not component a Location's Overwiew. Luggage Compartment Lamps

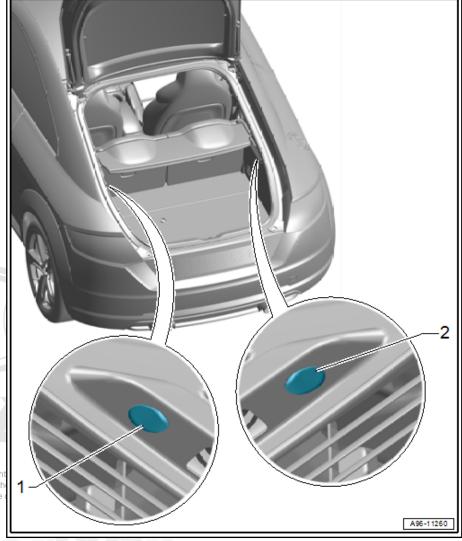
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1 - Left Luggage Compart-ment Lamp -W18-

- ☐ The luggage compartment lamp must be replaced if one of the LEDs is faulty
- Removing and Installing. Refer to ≥ C1.19 ompartment Lamp, Removing and Installing", page 176

2 - Right Luggage Compartment Lamp -W35-

- ☐ The luggage compartment lamp must be replaced if one of the LEDs is faulty
- □ Removing and Installing. Refer to ⇒ C1.19 ompartment Lamp, Removing and Installing", page 176.



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Component Location Overview - Roof Trim Panel Lamps 1.6



1 - Right Illuminated Vanity Mirror

- Removing and Installing. Refer to ⇒ V1.20 anity Mirror LampW20/Front Passenger Vanity Mirror LampW14, Removing and İnstalling", page 177
- ☐ LHD: Front Passenger Vanity Mirror Lamp -W14-
- □ RHD: Driver Vanity Mirror Lamp -W20-

2 - Left Reading Lamp

- ☐ The front roof module must be replaced if an LED is faulty. Refer to ⇒ I2.18 nterior Lamp/Reading Lamp, Removing and Instal-<u>ling", page 198</u>
- ☐ LHD: Driver Reading Lamp -W19-
- □ RHD: Front Passenger Reading Lamp -W13-

3 - Ambient Lighting

☐ The front roof module must be replaced if an LED is faulty. Refer to <u>⇒ I2.18 nterior</u> Lamp/Reading Lamp, Removing and Installing", page 198

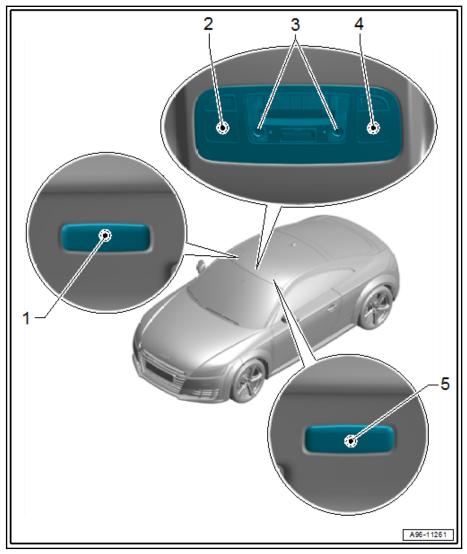
4 - Right Reading Lamp

- The front roof module must be replaced if an LED is faulty. Refer to ⇒ 12.18 nterior Lamp/Reading Lamp, Removing and Installing", page 198
- ☐ LHD: Front Passenger Reading Lamp -W13-
- □ RHD: Driver Reading Lamp -W19-

5 - Left Illuminated Vanity Mirror

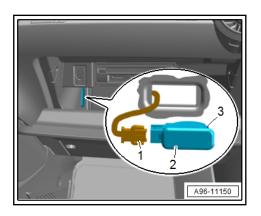
- □ Removing and Installing. Refer to ⇒ V1.20 anity Mirror LampW20/Front Passenger Vanity Mirror LampW14, Removing and Installing", page 177
- ☐ LHD: Driver Vanity Mirror Lamp -W20-
- □ RHD: Front Passenger Vanity Mirror Lamp -W14-





1.7 Glove Compartment Lamp -W6-, Removing and Installing

Removing



- Turn the light switch to position "0".
- Press in the retainer -3- using a flat-head screwdriver and pry out the glove compartment lamp -2-.
- Disconnect the connector -1-.

Installing

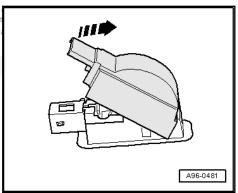
Install in the reverse order of removal while noting the following:

Insert the glove compartment lamp into the opening and engage on the opposite side.

Bulb for Glove Compartment Lamp -1.8 W6-, Replacing

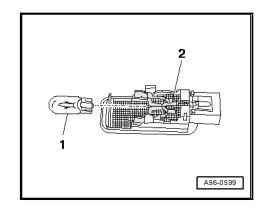
Removing

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- Remove the glove compartment lamp. Refer to ⇒ C1.7 ompartment LampW6, Removing and Installing", page 164
- Carefully pry out the cover over the lamp in direction of -arrow-.
- Remove the bulb -1- from the bulb socket -2- on the back of the glove compartment lamp.

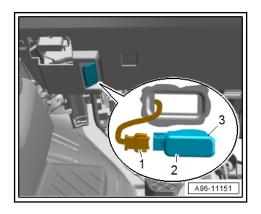




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1.9 Left Front Footwell Illumination Bulb -L151-/Right Front Footwell Illumination Bulb -L152-, Removing and Installing

Removing



- Press in the retainer -3- using a flat-head screwdriver and pry out the glove compartment lamp -2-.
- Disconnect the connector -1-.

Installing

Install in the reverse order of removal while noting the following:



Note

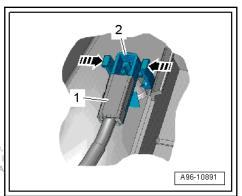
The entire footwell lamp must be replaced if an LED is faulty.

1.10 Central Locking -Safe- Indicator Lamp -K133-, Removing and Installing

Removing



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- Remove the front door trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Front Door Trim Panels; Front Door Trim Panel, Removing and Installing.
- Release the clips in direction of -arrows-.
- Remove the central locking LED -1- downward and out of the door trim panel -2-.

Installing

Install in the reverse order of removal while noting the following:

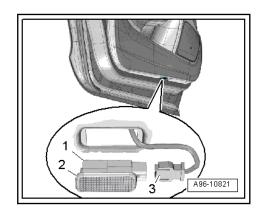


Note

The new Central Locking -Safe- Indicator Lamp -K133- must be connected with the door trim panel wiring harness.

- Disconnect the wire and connect it with the new wire for the Central Locking -SAFE- Indicator Lamp -K133-. Refer to ⇒ Electrical Equipment General Information; Rep. Gr. 97; Wiring Harness and Connector Repair; Wiring Harness, Repairing.
- 1.11 Driver Side Entry Lamp -W92-/Passenger Side Entry Lamp -W93-, Removing and Installing

Removing



Use a flat-head screwdriver to press in the retaining tab -1and pry out the entry lamp -2-.



- Disconnect the connector -3-.

Installing

Install in the reverse order of removal while noting the following:

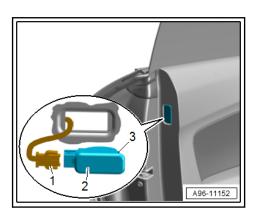


Note

The entire entry lamp must be replaced if an LED is faulty.

- Insert the entry lamp into the opening and engage on the opposite side.
- 1.12 Driver Door Warning Lamp -W30-/ Front Passenger Door Warning Lamp -W36-, Removing and Installing

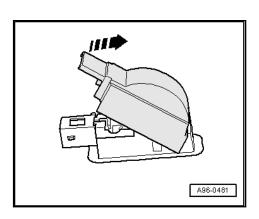
Removing

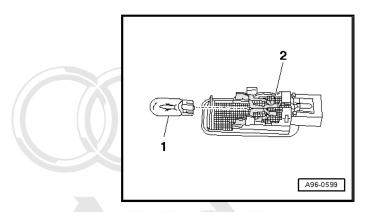


- Press the tab -3- in using a flat-head screwdriver and pry out the door warning lamp -2-.
- Disconnect the connector -1-.
- Carefully pry out the cover over the lamp in direction of -arrow-.



Remove the bulb -1- from the bulb socket -2- on the back of the door warning lamp.





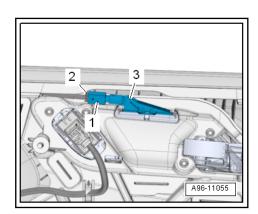
Installing

Install in the reverse order of removal while noting the following:

- Mount the cover on the door warning lamp.
- Mount the cover on the door warning lamp.

 Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not lnsert the door warning lamp into the opening and engage thorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG. on the opposite side.
- 1.13 **Driver Side Interior Door Handle Illu**mination Lamp -L219-/Passenger Side Interior Door Handle Illumination Lamp -L220-, Removing and Installing
- ⇒ S1.13.1 ide Interior Door Handle Illumination LampL219/Passenger Side Interior Door Handle Illumination LampL220, Removing and Installing", page 168
- ⇒ S1.13.2 ide Interior Door Handle Illumination LampL219/Passenger Side Interior Door Handle Illumination LampL220, Removing and Installing", page 169
- 1.13.1 Driver Side Interior Door Handle Illumination Lamp -L219-/Passenger Side **Interior Door Handle Illumination Lamp** -L220-, Removing and Installing

Removing



- Remove the front door trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Front Door Trim Panels; Front Door Trim Panel, Removing and Installing
- Turn the bulb socket -1- to the left and remove it from the lighting strip -3-.
- Disconnect the connector -2-.

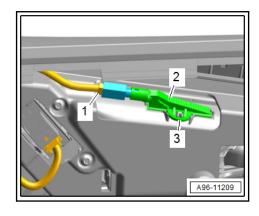
Installing

Install in reverse order of removal.

1.13.2 Driver Side Interior Door Handle Illumination Lamp -L219-/Passenger Side Interior Door Handle Illumination Lamp -L220-, Removing and Installing

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- Remove the front door trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Front Door Trim Panels; Front Door Trim Panel, Removing and Installing.
- Disconnect the connector -1-.
- Release the retainer -3- and remove the fiber-optic cable -2from the door trim panel.

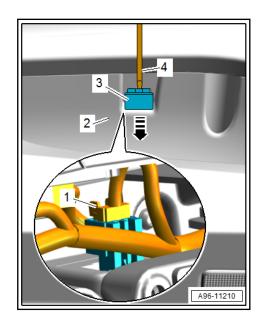
Installing

Install in reverse order of removal.

1.14 Driver Door Storage Compartment IIlumination Bulb -L160-/Front Passenger Door Storage Compartment Illumi-

nation Bulb -L161-, Removing and Installing

Removing



- Using a small screwdriver -4-, pry the lamp -3- out of the door trim panel -2- in direction of -arrow-.
- Disconnect the connector -1-.

Installing

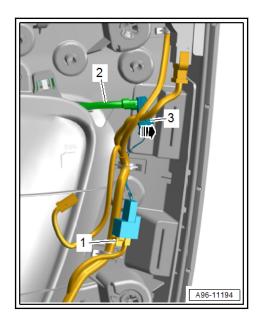
Install in reverse order of removal.

- 1.15 **Driver Side Door Ambient Lighting** Lamp -W86-/Passenger Side Door Ambient Lighting Lamp -W87-, Removing and Installing
- ⇒ S1.15.1 ide Door Ambient Lighting LampW86/Passenger Side Door Ambient Lighting LampW87, Removing and Instal-<u>ling", page 170</u>
- ⇒ C1.15.2 able for Driver Side Door Ambient Lighting LampW86/Passenger Side Door Ambient Lighting LampW87, Removing and Installing apage 171 Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability ⇒ f1.15.3 or Driver Side Door Speaker Triml 223/Lamp for Pas-Copyright by AUDI AG.
- senger Side Door Speaker TrimL224, Removing and Installing", page 172
- 1.15.1 **Driver Side Door Ambient Lighting** Lamp -W86-/Passenger Side Door Am-



bient Lighting Lamp -W87-, Removing and Installing

Removing



- Remove the front door trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Front Door Trim Panels; Front Door Trim Panel, Removing and Installing.
- Disconnect the connector -1- and free up the connector for the ambient lighting lamp.
- Unclip the lamp -3- from the door trim panel in direction of -arrow- and remove it from the fiber-optic cable -2-.

Installing

Install in the reverse order of removal while noting the following:



Note

The entire lamp must be replaced if an LED is faulty.

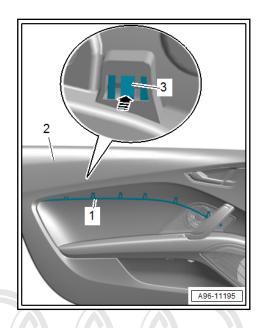
Fiber-Optic Cable for Driver Side Door 1.15.2 Ambient Lighting Lamp -W86-/Passen-





ger Side Door Ambient Lighting Lamp -W87-, Removing and Installing

Removing



- Driver Side Door Ambient Lighting Lamp -W86-/Passenger Side Door Ambient Lighting Lamp -W87-, Removing. Refer to ⇒ S1.15.1 ide Door Ambient Lighting LampW86/Passenger Side Door Ambient Lighting LampW87, Removing and Installing", page 170.
- Release all of the retainers -3- in direction of -arrow-.
- Pull the front of the fiber-optic cable -1- on the pull handle downward and out of the door trim panel -2- as shown.

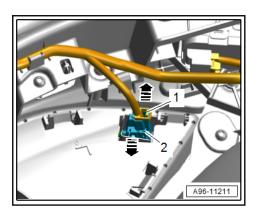


Note

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1.15.3 Lamp for Driver Side Door Speaker Trim -L223-/Lamp for Passenger Side Door Speaker Trim -L224-, Removing and Installing

Removing





- Remove the speaker trim. Refer to ⇒ Body Interior; Rep. Gr. 70; Front Door Trim Panels; Overview - Front Door Trim
- Disconnect the connector -1-.
- Release the retainers in direction of -arrows- and remove the lamp -2-.

Installing

Install in the reverse order of removal while noting the following:

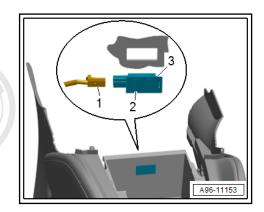


Note

The entire lamp must be replaced if an LED is faulty.

1.16 Storage Compartment Illumination Bulb -L120-, Removing and Installing

Removing



- Remove the center console insert. Refer to ⇒ Body Interior; Rep. Gr. 68; Center Console; Center Console Insert, Removing and Installing.
- Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not Pry out the lampe-2niusingoasmallscrewdriver.
- Press the tab -3- in using a flat-head screwdriver and pry out the lamp -2-.
- Disconnect the connector -1-.

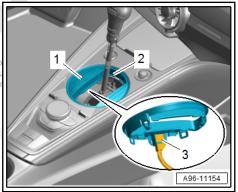
Installing

Install in reverse order of removal.

1.17 Selector Lever Transmission Range Position Display Unit -Y26-, Removing and Installing

Removing

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- Move the selector lever into "D/S" position.
- Switch off the ignition.
- Unclip the selector lever boot and fold it upward. Refer to
 ⇒ Transmission; Rep. Gr. 34; Selector Mechanism; Selector Lever Handle, Removing and Installing.
- Release the retainers -2- and remove the selector lever transmission range position display unit -1- upward.
- Disconnect the connector -3-.

Installing

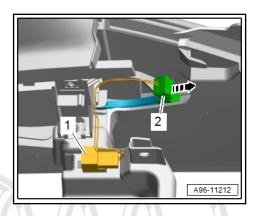
Install in reverse order of removal.

- 1.18 Front Center Console Ambient Lighting
 Bulb 1 -L193-/Front Center Console
 Ambient Lighting Bulb 2 -L194-, Removing and Installing
- ⇒ C1.18.1 enter Console Ambient Lighting Bulb 1L193/Front Center Console Ambient Lighting Bulb 2L194, Removing and Installing", page 174
- ⇒ C1.18.2 enter Console Ambient Lighting Bulb 1L193/Front Center Console Ambient Lighting Bulb 2L194, Removing and Installing", page 175
- 1.18.1 Front Center Console Ambient Lighting
 Bulb 1 -L193-/Front Center Console
 Ambient Lighting Bulb 2 -L194-, Removing and Installing

Removing

- Remove the center console. Refer to ⇒ Body Interior; Rep. Gr. 68; Center Console; Center Console, Removing and Installing.
- Free up the connector -1-.





Pry out the lamp -2- using a small screwdriver in direction of -arrow- and remove it from the fiber-optic cable.

Installing

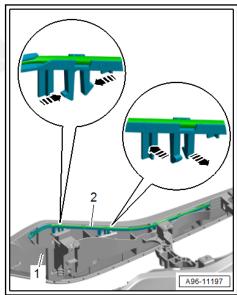
Install in reverse order of removal.

1.18.2 Front Center Console Ambient Lighting Bulb 1 -L193-/Front Center Console Ambient Lighting Bulb 2 -L194-, Re-

moving and Installing

Removing

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- Remove the Front Center Console Ambient Lighting Bulb 1 -L193-/Front Center Console Ambient Lighting Bulb 2 -L194-. Refer to ⇒ C1.18.1 enter Console Ambient Lighting Bulb 1L193/Front Center Console Ambient Lighting Bulb 2L194, Removing and Installing", page 174.
- Release the retainers in direction of -arrows-.
- Remove the fiber-optic cable -2- from the center console -1-.

Installing

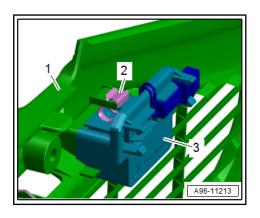
Install in the reverse order of removal while noting the following:

Press the fiber-optic cable into the upper cover of the center console until it engages audibly.

1.19 Luggage Compartment Lamp, Removing and Installing

Removing

- Remove the luggage compartment side trim panel. Refer to ⇒ Body Exterior; Rep. Gr. 70; Luggage Compartment Trim Panels; Luggage Compartment Side Trim Panel, Removing and Installing.
- Remove the cover -3- from the luggage compartment side trim panel -1-.

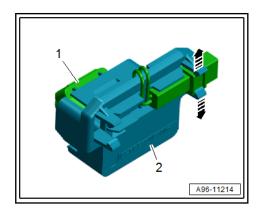




Note

Ignore -item 2-.

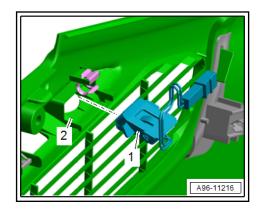
Release the retainers in direction of -arrows- and free up the connector.



Remove the luggage compartment lamp -1- from the cover -2-.

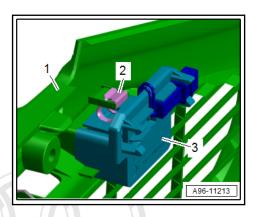


Installing



Install in the reverse order of removal while noting the following:

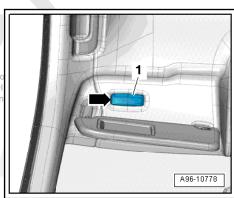
- Insert the luggage compartment lamp -1- into the opening for the luggage compartment side trim panel.
- Slide the cover -3- onto the luggage compartment side trim panel -1-. Make sure the clip -2- is positioned correctly while doing so.



Driver Vanity Mirror Lamp -W20-/Front 1.20 Passenger Vanity Mirror Lamp -W14-, Removing and Installing

Removing





- Pivot the sun visor forward.
- Carefully pry out the vanity mirror lighting -1- at the opening -arrow- using a flat-head screwdriver.
- Disconnect the connector.

Audi TT 2015 ➤, Audi TT Roadster 2015 ➤ Electrical Equipment - Edition 12.2021

Installing

Install in the reverse order of removal while noting the following:



Note

If one of the LEDs is faulty, then the entire vanity mirror lighting must be replaced.

Insert the vanity mirror lighting into the opening and engage it on the opposite side.





2 **Controls**

- ⇒ L2.1 ocation Overview Instrument Panel Controls", page
- ⇒ L2.2 ocation Overview Controls in Front Doors", page 181
- ⇒ L2.3 ocation Overview Controls in Center Console", page
- ⇒ L2.4 ocation Overview Controls in Luggage Compartment", page 184
- ⇒ L2.5 ocation Overview Controls in Roof Trim Panel", page
- ⇒ S2.6 witchE1, Removing and Installing", page 187
- ⇒ i2.7 n Instrument Panel, Removing and Installing", page 188
- ⇒ C2.8 ompartment Lamp SwitchE26, Removing and Installing", page 189
- ⇒ A2.9 djusting SwitchE43/Folding Mirror Adjustment SwitchE168, Removing and Installing", page 190
- ⇒ W2.10 indow Control Head in Driver DoorE512, Removing and Installing", page 190
- ⇒ I2.11 nterior Locking ButtonE308, Removing and Installing", page 191
- ⇒ M2.12 onitoring and Vehicle Inclination Deactivation ButtonE616, Removing and Installing", page 192
- ⇒ A2.13 uthorization ButtonE408, Removing and Installing", page 193
- ⇒ B2.14 rake ButtonEX12, Removing and Installing", page 194
- ⇒ T2.15 op Operation SwitchE137, Removing and Installing", page 195
- ⇒ W2.16 ind Deflector SwitchE278, Removing and Installing", page 196
- ⇒ L2.17 id Lock Cylinder Unlock ButtonF248, Removing and Installing", page 196
- ⇒ I2.18 nterior Lamp/Reading Lamp, Removing and Installing", page 198
- ⇒ G2.19 arage Door Opener Control HeadE284, Removing and Installing", page 199

2.1 Component Location Overview - Instrument Panel Controls





1 - Switch Module in Instrument Panel, Center -EX22-

- □ The following components are integrated in a single component
- **Emergency Flasher Button** -E229-
- ASR/ESP Button -E256-
- Parking Aid Button -E266-
- Parallel Parking Assistance Button -E581-
- Start/Stop Mode Button -E693-
- **Driving Profile Selection** Button -E735-
- Rear Spoiler Adjustment Switch -E127-
 - The components cannot be replaced separately if faulty.
 - □ Removing and Installing. Refer to \Rightarrow i2.7 n Instrument Panel, Removing and Installing", page 188

2 - Instrument Panel Vent

3 - Left Seat Heating Button -E653-

- □ Integrated in the Front A/C Display Control Head 1 - E774-
- A/C Display Control Head 1 -E774-, Remov-

6 3 8 2 10 ing and Installing. Refer to ⇒ Heating, Ventilation and Air Conditioning; Rep. Gr. 87; Display Control

Head.

4 - Front Passenger Airbag Deactivation Key Switch -E224-

- □ Overview. Refer to ⇒ Body Interior; Rep. Gr. 69; Front Passenger Side Airbag; Overview Front Passenger Side Airbag.
- □ RHD: is a mirror image

5 - Glove Compartment Lamp Switch -E26-

- □ Removing and Installing. Refer to ⇒ C2.8 ompartment Lamp SwitchE26, Removing and Installing", page 189
- RHD: is a mirror image

6 - Instrument Cluster

7 - Instrument Cluster Operation Button -E493-

- □ Removing and Installing. Refer to ⇒ i2.7.2 n Instrument Panel, Removing and Installing, Instrument Cluster Operation ButtonE493 ", page 189 .
- On the driver side

8 - Right Seat Heating Button -E654-

- □ Integrated in the Front A/C Display Control Head 5 -E778-
- Front A/C Display Control Head 5 -E778-, Removing and Installing. Refer to ⇒ Heating, Ventilation and Air Conditioning; Rep. Gr. 87; Display Control Head; Component Location Overview - Display Control Head.



9 - Instrument Panel Vent

10 - Light Switch -E1-

- ☐ With instrument panel and switch illumination dimmer switch, rear fog lamp button
- □ Removing and Installing. Refer to ⇒ S2.6 witchE1, Removing and Installing", page 187.
- □ RHD: is a mirror image

2.2 Component Location Overview - Controls in Front Doors

The overview shows a LHD vehicle as an example. For RHD vehicles the layout is a mirror image.



1 - Power Window Control Head in Driver Door -E512-

- The following components are combined in a single component
- Left Front Window Regulator Switch -E40-
- Right Front Power Window Switch in Driver Door -E81-
 - ☐ The components can authorized by copyright can authorize a components can authorize a copyright can be components. not be replaced sepa the rately if faulty.
 - Removing and Installing. Refer to <u>⇒</u> W2.10 indow Control Head in Driver DoorE512, Removing and Installing", page 190

2 - Mirror Adjusting Switch -E43-

- ☐ The following components are combined in a single component
- Mirror Selector Switch -E48-
- Folding Mirror Adjustment Switch -E168-
 - The components cannot be replaced separately if faulty.
 - □ Removing and Installing. Refer to ⇒ A2.9 djusting SwitchE43/Folding Mir-

ror Adjustment SwitchE168, Removing and Installing", page 190.

3 - Driver Interior Locking Button -E308-

□ Removing and Installing. Refer to ⇒ I2.11 nterior Locking ButtonE308, Removing and Installing", page 191 .

4 - Front Passenger Power Window Button -E716-

□ Removing and Installing. Refer to ⇒ W2.10 indow Control Head in Driver DoorE512, Removing and Installing", page 190

5 - Front Passenger Interior Locking Button -E309-

□ Removing and Installing. Refer to ⇒ I2.11 nterior Locking ButtonE308, Removing and Installing", page

6 - Front Passenger Door Contact Switch -F3-

- ☐ Integrated in the door lock. Cannot be replaced separately if faulty.
- Door Lock, Replacing. Refer to ⇒ Body Exterior; Rep. Gr. 57; Door Components; Door Lock, Removing and Installing.

7 - Interior Monitoring and Vehicle Inclination Deactivation Button -E616-

Overview. Refer to ⇒ -4.1 Interior Monitoring", page 201.

8 - Driver Door Contact Switch -F2-

☐ Integrated in the door lock. Cannot be replaced separately if faulty.



□ Door Lock, Replacing. Refer to ⇒ Body Exterior; Rep. Gr. 57; Door Components; Door Lock, Removing and Installing.

2.3 Component Location Overview - Controls in Center Console

⇒ L2.3.1 ocation Overview - Center Console Controls, Coupe", page 183

⇒ L2.3.2 ocation Overview - Center Console Controls, Roadster", page 183

2.3.1 Component Location Overview - Center Console Controls, Coupe

1 - Access/Start Authorization Button -E408-

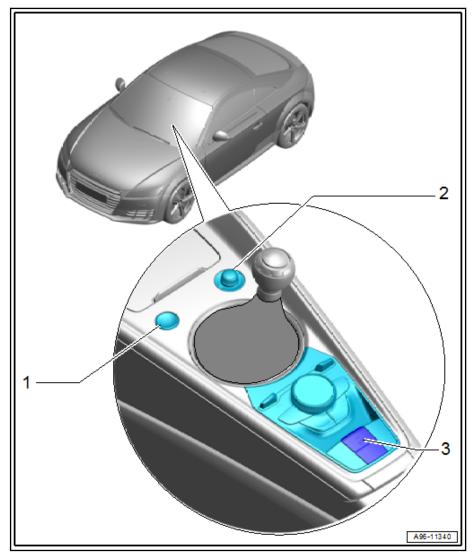
- Removing and Installing. Refer to ⇒ A2.13 uthorization ButtonE408, Removing and Installing", page 193 .
- □ RHD: is a mirror image

2 - Driver Volume Control -E67-

- □ Removing and Installing. Refer to ⇒ Communication; Rep. Gr. 91; Sound System; Component Location Overview -Sound System.
- □ RHD: is a mirror image

3 - Parking Brake Button -EX12-

□ Removing and Installing. Refer to ⇒ B2.14 rake Button-EX12, Removing and Installing", page 194



2.3.2 Component Location Overview - Center Console Controls, Roadster

1 - Convertible Wind Deflector Switch -E278-

Removing and Installing. Refer to ⇒ W2.16 ind Deflector SwitchE278, Removing and Installing", page <u> 196</u> .

2 - Access/Start Authorization Button = £408 inless authorised by AUE

- Removing and Instal-A2.13 uthorization ButtonE408, Removing and Installing", page <u> 193</u> .
- ☐ RHD: is a mirror image

3 - Driver Volume Control -E67-

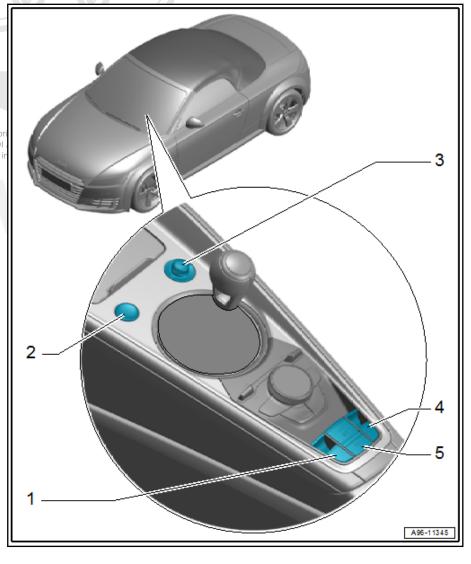
- □ Removing and Installing. Refer to ⇒ Communication; Rep. Gr. 91; Sound System; Component Location Overview -Sound System.
- □ RHD: is a mirror image

4 - Convertible Top Operation Switch -E137-

□ Removing and Installing. Refer to ⇒ T2.15 op Operation SwitchE137, Removing and Installing", page <u> 195</u>

5 - Parking Brake Button -EX12-

□ Removing and Installing. Refer to ⇒ B2.14 rake ButtonEX12, Removing and Installing", page 194.



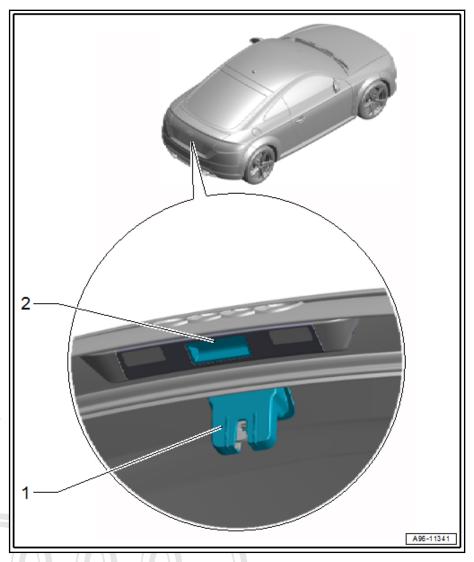
2.4 Component Location Overview - Controls in Luggage Compartment

1 - Rear Lid Contact Switch

- Integrated in the rear lid latch. Cannot be replaced separately if faulty.
- ☐ Replace the rear lid latch. Refer to ⇒ Body Exterior; Rep. Gr. 55; Rear Lid; Latch, Removing and Installing.

2 - Rear Lid Lock Cylinder Unlock Button -F248-

- ☐ The following components are integrated in the rear lid mechanism:
- Rear Lid Lock Cylinder Unlock Button -F248-
- Left License Plate Lamp -
- Right License Plate Lamp -X5-
 - ☐ The components cannot be replaced separately if faulty.
 - Removing and Installing. Refer to ⇒ L2.17 id Lock Cylinder Unlock ButtonF248, Removing and Installing", page



2.5 Component Location Overview - Controls in Roof Trim Panel

⇒ L2.5.1 ocation Overview - Controls in Roof Trim Panel, Section 1", page 185

⇒ L2.5.2 ocation Overview - Controls in Roof Trim Panel, Section 2", page 186

Component Location Overview - Controls in Roof Trim Panel, Section 1 Piblected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability 2.5.1

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1 - Right Vanity Mirror Lamp Contact Switch

- LHD: Front Passenger Vanity Mirror Lamp Contact Switch -F148-
- □ RHD: Driver Vanity Mirror Lamp Contact Switch -F147-
- Cannot be replaced separately
- ☐ If faulty, replace the sun visor. Refer to ⇒ Body Interior; Rep. Gr. 68; Vehicle Equipment; Sun Visor, Removing and Installing.

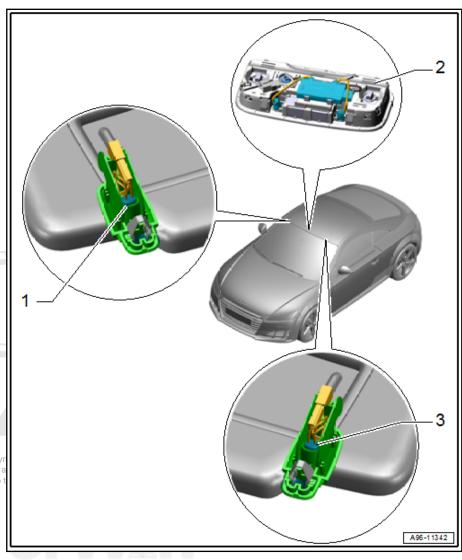
2 - Front Roof Module -WX3-

Removing and Installing. Refer to ⇒ 12.18 nterior Lamp/ Reading Lamp, Removing and Installing", page 198.

3 - Left Vanity Mirror Lamp **Contact Switch**

- ☐ LHD: Driver Vanity Mirror Lamp Contact Switch -F147-
- □ RHD: Front Passenger Vanity Mirror Lamp Contact Switch ##148=
- Integrated in the sun visor pivot bearing
- □ Cannot be replaced separately

☐ If faulty, replace the sun visor. Refer to ⇒ Body Interior; Rep. Gr. 68; Vehicle Equipment; Sun Visor, Removing and Installing.



2.5.2 Component Location Overview - Controls in Roof Trim Panel, Section 2



1 - Garage Door Opener Control Head -E284-

Removing and Installing. Refer to

⇒ G2.19 arage

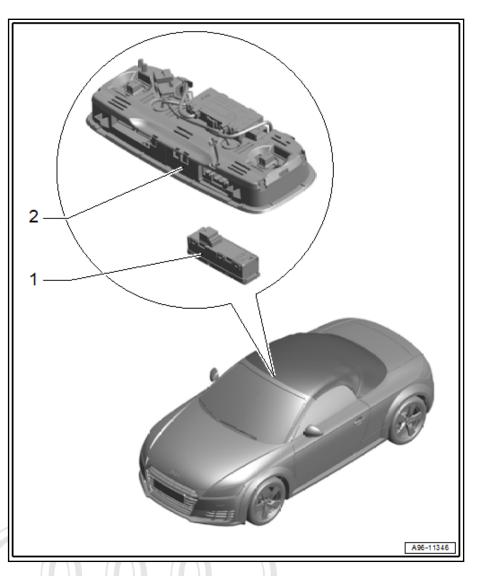
Door Opener Control

HeadE284, Removing

and Installing", page 199 .

2 - Front Roof Module -WX3-

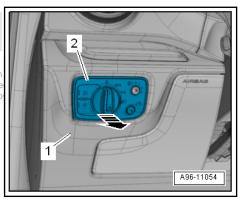
□ Removing and Installing. Refer to ⇒ I2.18 nterior Lamp/ Reading Lamp, Removing and Installing", page 198.



Light Switch -E1-, Removing and In-2.6 stalling

Removing

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- Turn the light switch to position "0".
- Remove the light switch -2- from the driver side instrument panel cover -1- in direction of -arrow-.



Note

If the light switch cannot be removed as described, remove the driver side instrument panel side cover. Refer to ⇒ Body Interior; Rep. Gr. 70; Instrument Panel; Instrument Panel Side Cover, Removing and Installing. Push the light switch out of the driver side instrument panel cover from behind.

Disconnect the connectors.

Installing

Install in the reverse order of removal while noting the following:

Push the light switch into the driver side instrument panel cover until the locking mechanism engages.

2.7 Buttons in Instrument Panel, Removing and Installing

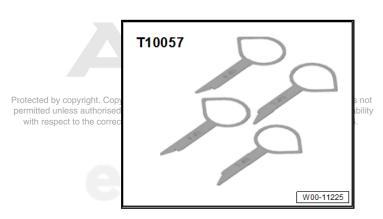
⇒ i2.7.1 n Instrument Panel, Removing and Installing, Switch Module in Instrument Panel, CenterEX22 ", page 188

⇒ i2.7.2 n Instrument Panel, Removing and Installing, Instrument Cluster Operation ButtonE493 ", page 189

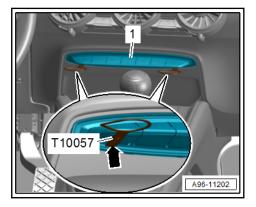
2.7.1 Buttons in Instrument Panel, Removing and Installing, Switch Module in Instrument Panel, Center -EX22-

Special tools and workshop equipment required

Radio Removal Tool -T10057-



Removing



Insert the Radio Removal Tool Radio Removal Tool -T10057- into the openings -arrow- on the left and right to release the tabs.



Disconnect the connector and remove the button unit -1-.

Installing

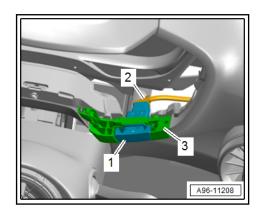
Install in the reverse order of removal while noting the following:

- Push the button unit in until it clicks into place.
- All six rubber buffers must be in the installation position.

2.7.2 Buttons in Instrument Panel, Removing and Installing, Instrument Cluster Operation Button -E493-

Removing





- Remove the instrument cluster trim. Refer to ⇒ Body Interior; Rep. Gr. 70; Instrument Panel; Instrument Cluster Trim, Re-Prooving and Installing private or commercial purposes, in part or in whole, is not
- permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability

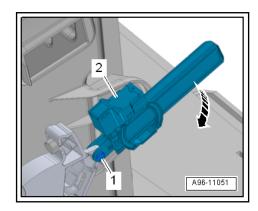
 Disconnect the connector to this document. Copyright by AUDI AG.
- Remove the button -1- from the mount -3-.

Installing

Install in the reverse order of removal while noting the following:

- Push the button in until it clicks into place.
- 2.8 Glove Compartment Lamp Switch -E26-, Removing and Installing

Removing



- Remove the glove compartment. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Glove Compartment, Removing and Installing.
- Remove the hinge pins -1-.
- Release the switch -2- clockwise -arrow- and remove it.

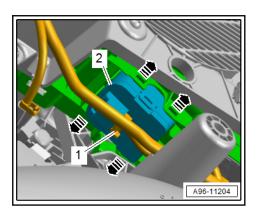
Installing

Install in reverse order of removal.

2.9 Mirror Adjusting Switch -E43-/Folding Mirror Adjustment Switch -E168-, Removing and Installing

Removing

- Remove the front door trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Front Door Trim Panels; Front Door Trim Panel, Removing and Installing.
- Move the insulation mat to the side.



- Disconnect the connector -1-.
- Carefully release the retainers using a small screwdriver in direction of -arrows-.
- Remove the mirror adjusting switch -2- from the mount.

Installing

Install in reverse order of removal.

2.10 Power Window Control Head in Driver Door -E512-, Removing and Installing



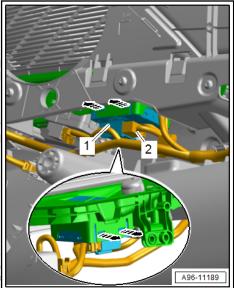
Note

The Front Passenger Power Window Button -E716- is removed the same way.

Removing







- Remove the front door trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Front Door Trim Panels; Front Door Trim Panel, Removing and Installing.
- Move the insulation mat to the side.
- Disconnect the connector -2- and free up the wiring harness.
- Release the retainers by lifting the tabs in direction of -arrows-.
- Remove the power window switch -1- from the mount.

Installing

Install in reverse order of removal.

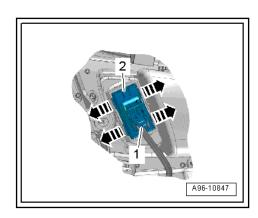
2.11 Driver Interior Locking Button -E308-, Removing and Installing



Note

The Front Passenger Interior Locking Button -E309- is removed the same way.

Removing



- Remove the interior door mechanism. Refer to ⇒ Body Interior; Rep. Gr. 70; Front Door Trim Panels; Interior Door Mechanism, Removing and Installing.
- Release the retainers in direction of -arrows-.
- Remove the interior locking switch -1- from the mount.

Installing

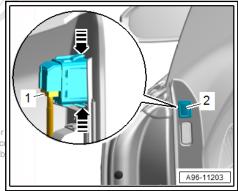
Install in reverse order of removal.

2.12 Interior Monitoring and Vehicle Inclination Deactivation Button -E616-, Removing and Installing

Removing



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- Remove the front door trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Front Door Trim Panels; Front Door Trim Panel, Removing and Installing.
- Disconnect the connector -1-.
- Release the retainers in direction of -arrows-.
- Remove the interior locking switch -2- from the mount.

Installing

Install in reverse order of removal.



2.13 Access/Start Authorization Button -E408-, Removing and Installing

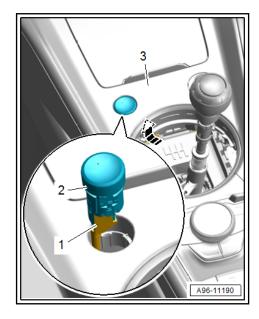
⇒ A2.13.1 uthorization ButtonE408, Removing and Installing, Vehicles with Manual Transmission", page 193

⇒ A2.13.2 uthorization ButtonE408, Removing and Installing, Vehicles with Dual Clutch Transmission", page 194

2.13.1 Access/Start Authorization Button -E408-, Removing and Installing, Vehicles with Manual Transmission

Removing

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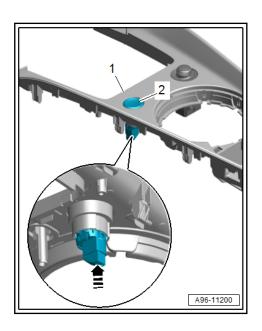
- Remove the shift lever boot from the center console insert. Refer to ⇒ Transmission; Rep. Gr. 34; Selector Mechanism; Gearshift Knob, Removing and Installing.
- Push the access/start authorization button -2- upward through the opening from below and remove it from the mount -3-.
- Disconnect the connector -1-.

Installing

Install in reverse order of removal.

2.13.2 Access/Start Authorization Button -E408-, Removing and Installing, Vehicles with Dual Clutch Transmission

Removing



- Remove the center console insert. Refer to ⇒ Body Interior; Rep. Gr. 68; Center Console; Center Console Insert, Removing and Installing.
- Push the access/start authorization button -2- upward through the opening from below and remove it from the mount -1- in direction of -arrow-.

Installing

Install in reverse order of removal.

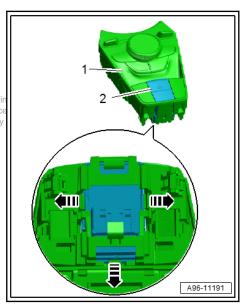
Parking Brake Button -EX12-, Remov-2.14 ing and Installing

Removing



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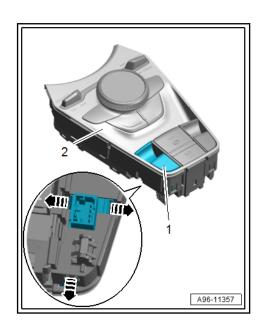
- Remove the Multimedia System Control Head -E380-. Refer to ⇒ Communication; Rep. Gr. 91; Infotainment System; Component Location Overview - Infotainment System.
- Release the clips in direction of -arrows-.
- Remove the button -2- from the Multimedia System Control Head -E380- -1-.

Installing

Install in reverse order of removal.

2.15 Convertible Top Operation Switch -E137-, Removing and Installing

Removing



- Remove the Multimedia System Control Head -E380-. Refer to \Rightarrow Communication; Rep. Gr. 91; Infotainment System; Component Location Overview - Infotainment System.
- Release the clips in direction of -arrows-.
- Remove the button -1- from the Multimedia System Control Head -E380- -2-.

Installing

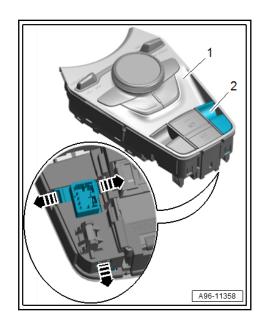
Install in reverse order of removal.





2.16 Convertible Wind Deflector Switch -E278-, Removing and Installing

Removing



- Remove the Multimedia System Control Head -E380-. Refer to ⇒ Communication; Rep. Gr. 91; Infotainment System; Component Location Overview - Infotainment System.
- Release the clips in direction of -arrows-.
- Remove the button -2- from the Multimedia System Control Head -E380- -1-.

Installing

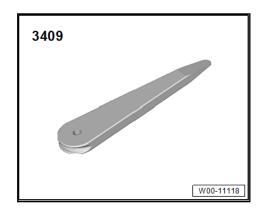
Install in reverse order of removal.

2.17 Rear Lid Lock Cylinder Unlock Button -F248-, Removing and Installing

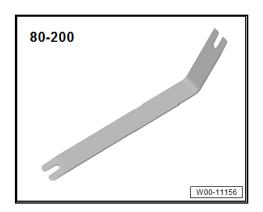
Special tools and workshop equipment required

Trim Removal Wedge -3409-





Pry Lever -80-200-





Note

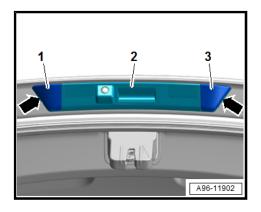
The Rear Lid Lock Cylinder Unlock Button -F248- and the Left License Plate Lamp -X4-/ Right License Plate Lamp -X5- are integrated in the grip piece. Cannot be replaced separately if faulty.

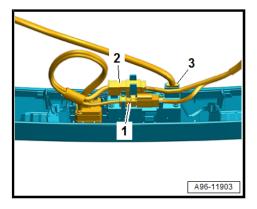
Removing



Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted Carefully, release, and remove the left and right side cover with respleand 3-with the infrimit Removal Wedge #3409 Juto do so position on the opening -arrows-.

- Pry up the grip piece -2- with the Pry Lever -80-200- from thé rear lid.
- Disconnect the connector -3-.





- If equipped, free up the connector -2- and antenna wire -1-.

Installing

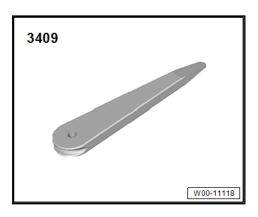
Install in the reverse order of removal while noting the following:

For vehicles with a rearview camera, the Rearview Camera -R189- must be recalibrated. Refer to ⇒ Communication; Rep. Gr. 91; Rearview Camera System; Rearview Camera System, Calibrating.

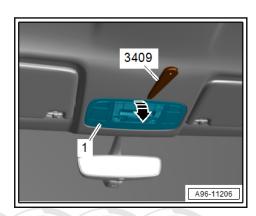
2.18 Front Interior Lamp/Reading Lamp, Removing and Installing

Special tools and workshop equipment required

◆ Trim Removal Wedge -3409-



Removing



- Pry the roof module -1- out of the roof opening using the Trim Removal Wedge -3409-.
- Disconnect the connectors.

Installing

Install in the reverse order of removal while noting the following:



Note

The roof module must be completely replaced if an LED is faulty.

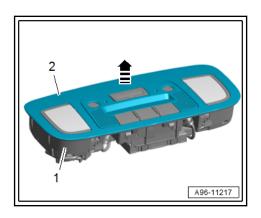
Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not Insert the roof module into the roof opening and pressioneits authorised by AUDI AG. AUDI AG does not guarantee or accept any liability to the correctness of information in this document. Copyright by AUDI AG. until it audibly engages.



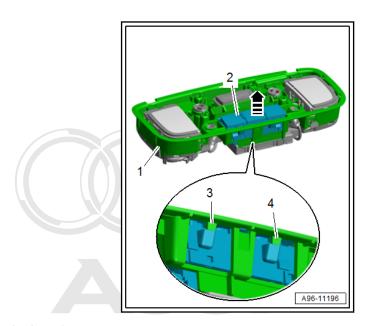


2.19 Garage Door Opener Control Head -E284-, Removing and Installing

Removing



- Remove the front interior lamp/reading lamp. Refer to ⇒ 12.18 nterior Lamp/Reading Lamp, Removing and Installing",
- Remove the Anti-Theft Alarm System Sensor -G578-, if equipped. Refer to ⇒ A4.3 larm System SensorG578, Removing and Installing", page 203
- Carefully pry the diffusion lens -2- out of the interior lamp -1in direction of -arrow-.
- Release the retainers -3 and 4-.



Remove the control head -2- from the front interior lamply right. Copying for private or commercial purposes, in part or in whole, is not reading lamp -1- in direction of -arrow-. permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

Installing

Install in reverse order of removal.

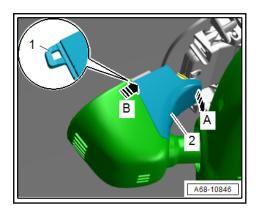


Additional Lamps and Controls in 3 Vehicle Interior

⇒ L3.1 ocation Overview - Additional Lamps and Controls in Vehicle Interior", page 200

3.1 Component Location Overview - Additional Lamps and Controls in Vehicle Interior

Automatic High Beam Assist Control Module -J844-



Integrated in the interior rearview mirror base.



Note

The Automatic High Beam Assist Control Module -J844- cannot be replaced separately. If faulty replace the interior rearview mirror. Refer to ⇒ Body Interior; Rep. Gr. 68; Interior Rearview Mirror, Interior Rearview Mirror, Removing and Installing.







4 Anti-Theft Alarm System

- ⇒ -4.1 Interior Monitoring", page 201
- ⇒ H4.2 ornH12, Removing and Installing", page 202
- ⇒ A4.3 larm System SensorG578, Removing and Installing", page 203

4.1 Overview - Interior Monitoring

- 1 Nut
 - □ 5 Nm
- 2 Bracket
 - □ For alarm horn
- 3 Nut
 - □ 7 Nm

4 - Alarm Horn -H12-

□ Removing and Installing. Refer to = H4.2 ornH12, Removing and Installing", page 202

5 - Front Interior Lamp

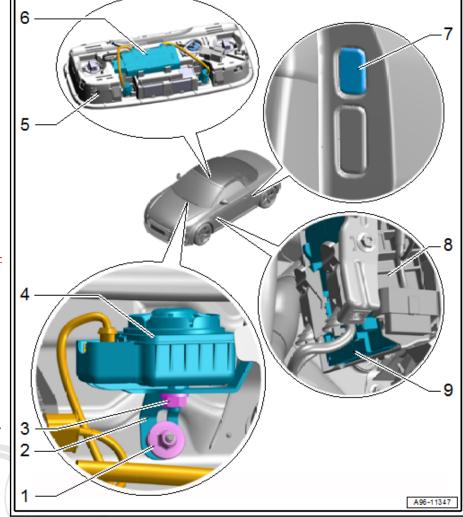
□ Removing and Installing. Refer to ⇒ 12.18 nterior Lamp/ Reading Lamp, Removing and Installing", page 198.

6 - Anti-Theft Alarm System Sensor -G578-

Removing and Installing. Refer to ⇒ A4.3 larm System SensorG578, Removing and Installing", page 203 .

7 - Interior Monitoring and Vehicle Inclination Deactivation Button -E616-

- RHD: is a mirror image
- Removing and Installing. Refer to M2.12 onitoring and



Vehicle Inclination Deactivation ButtonE616, Removing and Installing", page 192.

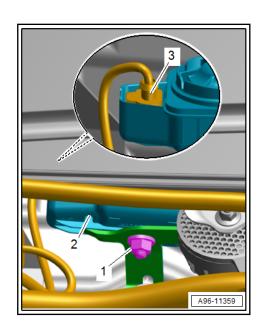
8 - Bracket

- ☐ For vehicle electrical system control module
- 9 Vehicle Electrical System Control Module -J519-
 - ☐ With Central Locking and Anti-Theft Alarm System Antenna -R47-
 - Overview. Refer to ⇒ L2.1 ocation Overview Control Modules", page 242.



4.2 Alarm Horn -H12-, Removing and Installing

Removing



- Remove the plenum chamber cover. Refer to ⇒ Body Exterior; Rep. Gr. 50; Bulkhead; Plenum Chamber Cover, Removing and Installing.
- Remove the nut -1-.
- Remove the alarm horn -2- from the bracket.
- Disconnect the connector -3-.
- Remove the alarm horn.

Installing

Install in reverse order of removal.

Tightening Specifications

Refer to ⇒ -4.1 Interior Monitoring", page 201



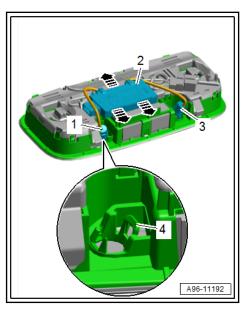




4.3 Anti-Theft Alarm System Sensor -G578-, Removing and Installing

Removing





- Remove the roof module. Refer to ⇒ I2.18 nterior Lamp/ Reading Lamp, Removing and Installing", page 198.
- Releasenthe retainers in direction of Parrows and remove ept any liability the anti-theft alarm system sensor 22 from the interior lamp/DI AG. reading lamp.
- Release the retainer -4- and loosen the individual sensors -1 and 3- for interior monitoring from the interior lamp/reading lamp.
- Remove the anti-theft alarm system sensor.

Installing

Install in the reverse order of removal while noting the following:

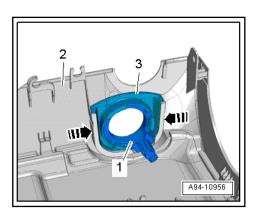
- Press the trim for the individual sensor into the windshield frame lower trim panel until it engages completely.
- Insert the individual sensor into the mount.
- Press the mount into the trim until it engages completely.

5 **Anti-Theft Immobilizer**

⇒ I5.1 mmobilizer Reader Coil, Removing and Installing", page

5.1 Anti-Theft Immobilizer Reader Coil, Removing and Installing

Removing



- Move the steering wheel as far to the rear and down as possible. Use the full steering column adjustment range for
- Remove the lower steering column trim panel. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments/Covers; Lower Steering Column Trim Panel, Removing and Installing.
- Release the tabs in direction of -arrows- and remove the mount -3- upward from the lower steering column trim panel -2-.
- Remove the reader coil -1- from the mount.

Installing

Install in the reverse order of removal while noting the following:

- Press the reader coil into the mount until it engages audibly.





Lane Change Assistance 6

- ⇒ -6.1 Lane Change Assistance", page 205
- ⇒ C6.2 hange Assistance Warning Lamp in Driver Exterior Rearview MirrorK233/Lane Change Assistance Warning Lamp in Front Passenger Exterior Rearview MirrorK234, Removing and Installing", page 207
- ⇒ C6.3 hange Assistance Control ModuleJ769/Lane Change Assistance Control Module 2J770, Removing and Installing", page 207
- ⇒ C6.4 hange Assistance, Calibrating", page 208
- 6.1 Overview - Lane Change Assistance



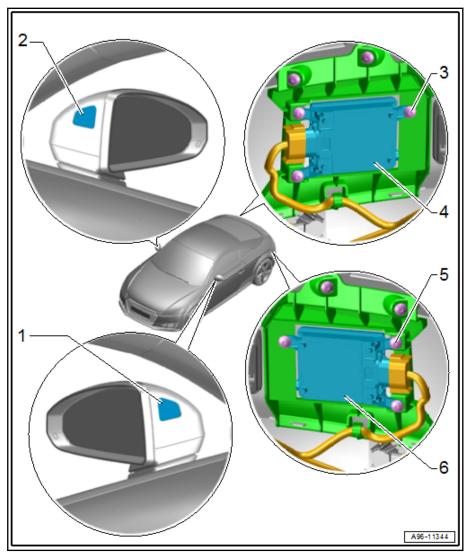


1 - Lane Change Assistance Warning Lamp in Left Exterior **Rearview Mirror**

- Removing and Installing. Refer to ⇒ C6.2 hange Assistance Warning Lamp in Driver Exterior Rearview MirrorK233/Lane Change Assistance Warning Lamp in Front Passenger Exterior Rearview MirrorK234, Removing and Installing", page <u> 207</u> .
- □ LHD: Lane Change Assistance Warning Lamp in Driver Exterior Rearview Mirror -K233-
- ☐ RHD: Lane Change Assistance Warning Lamp in Front Passenger Exterior Rearview Mirror -K234-

2 - Lane Change Assistance Warning Lamp in Right Exterior Rearview Mirror

Removing and Installing. Refer to ⇒ C6.2 hange Assistance Warning Lamp in Driver **Exterior Rearview Mir**rorK233/Lane Change Assistance Warning Lamp in Front Passenger Exterior Rearview MirrorK234, Removing and Installing", page <u> 207</u> .



- LHD: Lane Change Assistance Warning Lamp in Front Passenger Exterior Rearview Mirror -K234-
- RHD: Lane Change Assistance Warning Lamp in Driver Exterior Rearview Mirror -K233-

3 - Bolt

□ 2 Nm

Quantity: 3

4 - Lane Change Assistance Control Module -J769-

- □ Removing and Installing. Refer to ⇒ C6.3 hange Assistance Control Module J769/Lane Change Assistance Control Module 2J770, Removing and Installing", page 207.
- ☐ Calibrating. Refer to <u>⇒ C6.4 hange Assistance, Calibrating</u>", page 208.

5 - Bolt

□ 2 Nm

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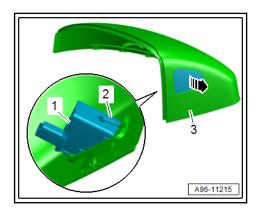
6 - Lane Change Assistance Control Module 2 J. 7.70 information in this document. Copyright by AUDI AG.

- □ Removing and Installing. Refer to ⇒ C6.3 hange Assistance Control Module J769/Lane Change Assistance Control Module 2J770, Removing and Installing", page 207.
- ☐ Calibrating. Refer to <u>⇒ C6.4 hange Assistance, Calibrating", page 208</u>.



6.2 Lane Change Assistance Warning Lamp in Driver Exterior Rearview Mirror -K233-/Lane Change Assistance Warning Lamp in Front Passenger Exterior Rearview Mirror -K234-, Removing and Installing

Removing



- Remove the mirror trim. Refer to ⇒ Body Exterior; Rep. Gr. 66; Exterior Rearview Mirror; Mirror Trim, Removing and Installing.
- Release the tab -2- and remove the warning lamp -1- from the mirror cap -3- in direction of -arrow-.

Install in the reverse order of removal while noting the following:



Note

If an LED is faulty, the entire lane change assistance warning lamp in the exterior rearview mirror must be replaced.

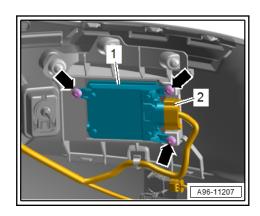
6.3 Lane Change Assistance Control Module -J769-/Lane Change Assistance ate or commercial purposes, in part or in whole, is not permitted these authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Control Module 2 47704; Removing formation in this document. Copyright by AUDI AG. and Installing



Note

If replacing the control module, select the "Replace control module" function for the corresponding control module on the ⇒ Vehicle diagnostic tester.

Removing



- Remove the rear bumper cover. Refer to ⇒ Body Exterior; Rep. Gr. 63; Rear Bumper; Bumper Cover, Removing and Installing.
- Remove the bolts -arrows-.
- Remove the lane change assistance control module -1-.
- Disconnect the connector -2-.

Installing

Install in the reverse order of removal while noting the following:

Calibrate the Lane Change Assistance Control Module -J769-/Lane Change Assistance Control Module 2 -J770-. Refer to <u>⇒ C6.4 hange Assistance, Calibrating</u>", page 208.

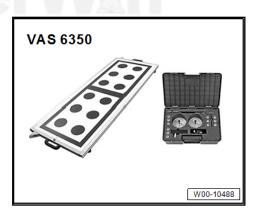
Tightening Specifications

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6.4 Lane Change Assistance, Calibrating

Special tools and workshop equipment required

- Vehicle Diagnostic Tester
- Calibration Unit -VAS6350A-



When a software update should be made, this must be performed before the calibration.

Conditions

- The Lane Change Assistance Control Module -J769- / Lane Change Assistance Control Module 2 -J770- must be calibrated during the following conditions:
- Lane Change Assistance Control Module -J769- or Lane Change Assistance Control Module 2 -J770- was replaced.



- The rear bumper cover was damaged by a parking block, for example.
- The rear bumper cover was removed and installed.
- The threaded connections on the bumper mount are loosened.
- "No or incorrect basic setting/adaptation" is stored in the DTC memory.

Preparing for Calibration



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1 - Calibration Tool - Spacing Laser -VAS6350/2-

- For distance measurement
- Usage information. Refer to the ⇒ Calibration Tool -VAS6350- Owner's Manual.

2 - Calibration Tool - VAS6350-

3 - Level

- ☐ On the Calibration Tool -VAS6350A-
- ☐ To check the horizontal position of the Calibration Tool -VAS6350A-

4 - Catch Bracket

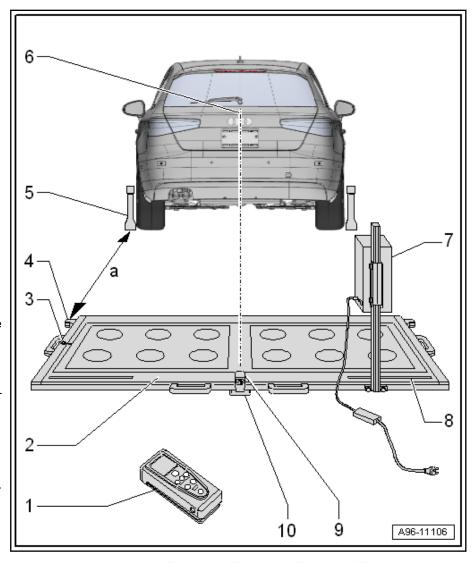
- ☐ To mount the Calibration Tool Spacing Laser -VAS6350/2- for the distance measurement
- ☐ Distance to the Calibration Tool Wheel
 Center Mountings VAS6350/1- on the rear
 wheels: dimension -a= 1700 ± 2 mm

5 - Calibration Tool -Wheel Center Mountings -VAS6350/1-

■ With wheel bolt adapter and measuring paddle

6 - Emblem

☐ The laser pointer is aligned to the center of the emblem



7 - Calibration Tool - Lane Change Calibration Tool -VAS6350/4-

- ☐ Is moved from one side of the measuring field to the other during calibration
- ☐ When installed correctly, the vehicle electrical system voltage line must be connected at lower left of the calibration device (as seen in direction of travel)

8 - Measuring Scale

☐ For positioning the Calibration Tool - Lane Change Calibration Tool -VAS6350/4-

9 - Calibration Tool - Linear Laser -VAS6350/3A-

- With "laser protective eyewear"
- ☐ On the Calibration Tool -VAS6350A-
- □ Refer to ⇒ Calibration Tool Line Laser, VAS6350/3A- Owner's Manual for handling. in part or in whole, is not

10 - Plastic Foot

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- Adjustable for adjusting the horizontal position of the Calibration Tool -VAS6350A-
- Quantity: 3

Preliminary Work

- Move the vehicle onto a solid, flat surface.
- Apply the parking brake the vehicle must not move during the measurement.



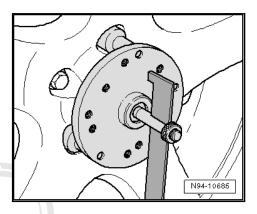
- Place the front wheels in a straight-ahead position steering wheel in neutral position.
- Connect the ⇒ Vehicle diagnostic tester.



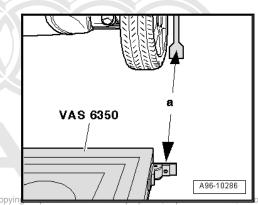
Note

If an error message appears in the display. Refer to the ⇒ Vehicle Diagnostic Tester Operating Instructions.

- Switch the ignition on.
- Remove the label with the metal foil from the bumper cover, if necessary.
- Secure three suitable wheel bolt adapters for the wheel bolts on each Calibration Tool - Wheel Center Mountings -VAS6350/1-.

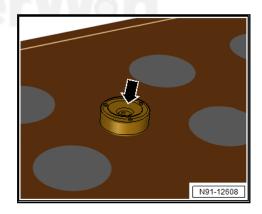


- Insert the measuring paddle at both Calibration Tool Wheel Center Mountings -VAS6350/1- and secure with the locking nut.
- Place the Calibration Tool Wheel Center Mountings -VAS6350/1- onto the wheel bolts on both rear wheels.
- The wheel center mounting rotation center must be in the wheel rotation center.
- Place the Calibration Tool Wheel Center Mounting -VAS6350/1A- on the wheels so that any anti-theft wheel bolts are not connected to the wheel center mounting ercial purposes, in part or in whole, is not t guarantee or accept any liability
- Adjust the measuring paddle using the locking nuts so that ment. Copyright by AUDI AG. they move freely just above the floor.
- The measuring paddles must move easily.
- The measuring paddles must be vertical.
- Position the Calibration Tool -VAS6350A- at distance -a- to the rear wheels.

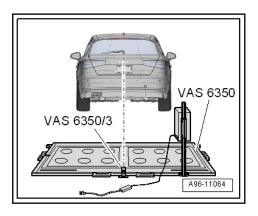


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- Dimension -a- = 1,700 mm
- Using the bubble level (level indicator) -arrow-, bring the Calibration Tool -VAS6350A- into a horizontal position by turning the plastic bases.



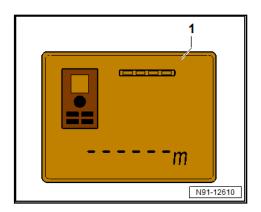
Wear "laser protective eyewear".



- Turn on the Calibration Tool Linear Laser -VAS6350/3A- on the Calibration Tool - VAS6350A-.
- Align the Calibration Tool -VAS6350A- so that the Calibration Tool - Linear Laser -VAS6350/3A- strikes the center of the emblem on the rear lid.
- Turn on the Calibration Tool Spacing Laser -VAS6350/2A-. Refer to ⇒ Calibration Tool - Spacing Laser -VAS6350/2A-Operating Instructions.

The Following Display Appears -1-:

N91-12611



The display -2- shows how to position the Calibration Tool -Spacing Laser -VAS6350/2A-.



- -arrow 1-: position with front edge
- -arrow 3-: position with rear edge
- Press the corresponding button.
- For distance measurement, hold the Calibration Tool Spac-Protected ing Laser - VAS6350/2A - - 2 - flush to the right catch bracket permitted **as a Shown** sed by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.



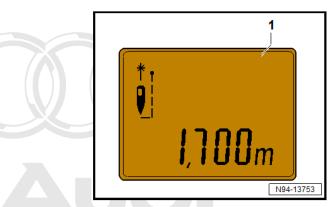
- N94-10684
- The Calibration Tool Spacing Laser -VAS6350/2- must lie firmly against the catch bracket.
- Push the measurement button briefly.

The laser switches on.

Make sure the "laser beam" for the distance measurement contacts the lower enlarged part of the measuring paddle

If that is not the case, correct the measuring paddle -1- height using the clamping screw on the Calibration Tool - Wheel Center Mounting -VAS6350/1A-.

- Use one hand to hold the Calibration Tool Spacing Laser -VAS6350/2A- firmly in the catch bracket on the Calibration Tool -VAS6350A-; the laser beam should be seen on the measuring paddle during this.
- Then press the measurement button for the distance measurement briefly.



Display on Calibration Tool - Spacing Laser -VAS6350/2A-:

- "1,700 m (5,577.4 feet)" (specified value P4700 \(\Delta\) 2 mm). Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability
- Repeat the measuring procedure from the left catch bracket less of information in this document. Copyright by AUDI AG. to the left rear wheel.
- The distance value must be the same on both sides.
- If both measured values are not the same, then readjust the Calibration Tool - VAS6350A- correspondingly until the distance values are the same on both sides.
- Make sure the Calibration Tool Line Laser -VAS6350/3Astrikes the center above the emblem and that the level indicator remains centered. Adjust if necessary.

Calibration Procedure

The following should not occur during the calibration procedure:

- No metallic reflectors may be located within a 2 m (6.6 feet) radius of the calibration tool (meaning tool carts, metal cabinets).
- Vehicle doors must not be opened or closed.
- People must not sit in the vehicle.
- People must not go between the vehicle and the Calibration Tool - Lane Change Calibration Tool -VAS6350/4-.

The ⇒ Vehicle diagnostic tester is connected.

- Select the Diagnostic mode and start the diagnosis.
- Select the Test plan tab.
- Select the <u>Select individual test</u> button and select the following tree structure consecutively:
- ♦ Body
- Electrical system
- ♦ 01 OBD-capable systems
- ♦ 3C Lane Change Assistance Control Module J769
- ♦ 3C Lane change assistance control module, functions
- ♦ 3C Calibration



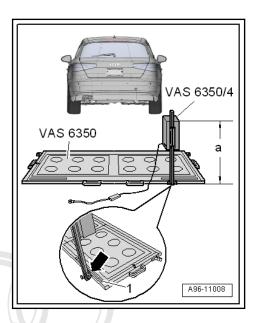
Start the selected program and follow the instructions on the Vehicle Diagnostic Tester display.



Note

The following information clarifies which version of the lane change assistance is installed in the vehicle (SWA2.0).

Secure the Calibration Unit for Lane Change Assist -VAS6350/4- to the right rear side on the mount of the Calibration Tool -VAS6350A-



When installed correctly, the vehicle electrical system voltage wire must be connected at the bottom left of the calibration device (as seen in direction of travel).

Dimension -a- is measured from the upper edge of the calibration device to the floor.

Model	TT Coupe	TT Roadster	
Adjustment dimension height in	769	769	
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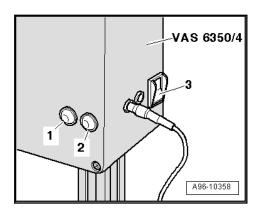
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The indicator on the base of the Calibration Tool - Lane Change Calibration Tool -VAS6350/4- must align with the adjustment dimension on the measuring scale -1- on the measuring field -arrow-.

Model	TT Coupe	TT Roadster
Right adjustment dimension read in mm on the measuring scale -1-	827	887

Connect the Calibration Tool - Lane Change Calibration Tool -VAS6350/4- to the vehicle electrical system voltage.





- Turn on the Calibration Tool Lane Change Calibration Tool -VAS6350/4- at the voltage switch -3-.
- The green LED -1- must turn on.



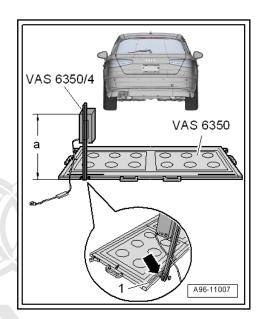
Note

If the red LED -2- comes on: Check the Calibration Tool - Lane Change Calibration Tool -VAS6350/4-.

Follow the instructions in the vehicle diagnostic tester display.

During the program sequence, there is a prompt to switch the Calibration Tool - Lane Change Calibration Tool -VAS6350/4from the right to the left side of the Calibration Tool -VAS6350Ă-

Turn off the Calibration Tool - Lane Change Calibration Tool -VAS6350/4- and reposition the calibration tool.



When installed correctly, the vehicle electrical system voltage wire must be connected at the bottom left of the calibration device (as seen in direction of travel).

Dimension -a- is measured from the upper edge of the calibra-nertial purposes, in part or in whole, is not tion device to the floor. permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.



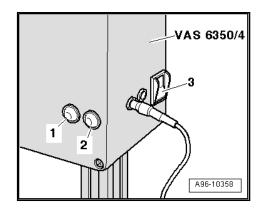
Model	TT Coupe	TT Roadster
Adjustment dimension height in mm dimension -a-	769	769

The indicator on the base of the Calibration Tool - Lane Change Calibration Tool -VAS6350/4- must align with the adjustment dimension on the measuring scale -1- on the méasuring field -arrow-.

Model	TT Coupe	TT Roadster
Left adjustment dimension read in mm on the measuring scale-1-	827	887

Turn on the Calibration Tool - Lane Change Calibration Tool -VAS6350/4- at the voltage switch -3-.





- The green LED -1- must turn on.
- Followithe instructions in the vehicle diagnostic tester dis any liability play. with respect to the correctness of information in this document. Copyright by AUDI AG.
- Switch off the ignition after successful calibration.
- Disconnect the Vehicle Diagnostic Tester from the diagnostic connection.

7 **Driver Assistance Systems Front** Camera

⇒ L7.1 ocation Overview - Driver Assistance Systems Front Camera", page 218

⇒ A7.2 ssistance Systems Front Camera, Removing and Installing", page 218

7.1 Component Location Overview - Driver Assistance Systems Front Camera

1 - Cover

2 - Driver Assistance Systems Front Camera -R242-

Removing and Installing. Refer to ⇒ A7.2 ssistance Systems Front Camera, Removing and Installing", page 218

3 - Lens

- ☐ With windshield defog-
- Removing and Installing. Refer to A7.2 ssistance Systems Front Camera, Removing and Installing", page 218

4 - Retaining Plate

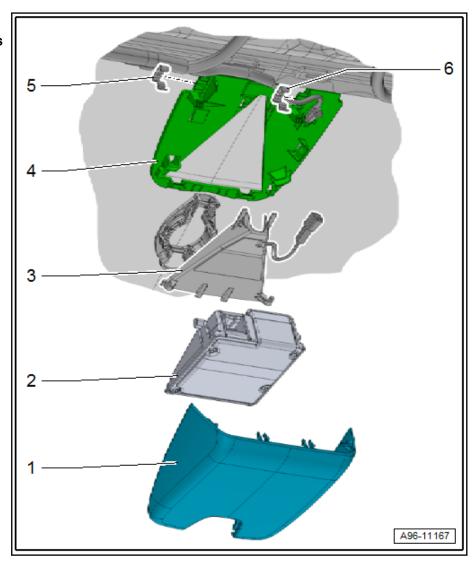
Cannot be separated from the windshield

5 - Clip

☐ Always replace if removed

6 - Clip

□ Always replace if removed



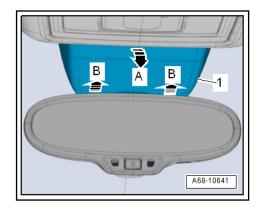
7.2 **Driver Assistance Systems Front Cam**era, Removing and Installing



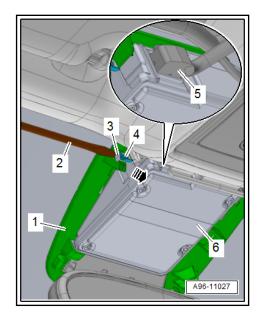
Note

If replacing the control module, select the "Replace control module" function for the corresponding control module on the ⇒ Vehicle diagnostic tester.

Removing



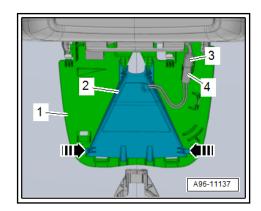
- Unclip the rear cover -1- from the headliner and pull it downward in direction of -arrow A-.
- Disengage the front cover from the front camera bracket in direction of -B arrows- and remove rearward.
- Position the screwdriver -2- on the retaining pin -3- as shown and slowly press the front camera -6- out of the clip -4- in direction of -arrow-.





- Remove the front camera out of the guides for the baseplate -1-.
- Disconnect the connector -5- and remove the front camera.

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- Free up the connector -4- and disconnect the connector -3-.
- Press the retainers in the direction of -arrow- and remove the lens -2- downward from the baseplate -1-.

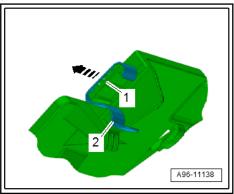
Install in the reverse order of removal while noting the following:



Note

- The camera field of vision on the inside of the windshield must not be fogged up or dirty.
- The clips must be replaced each time the front camera is removed.
- Remove the clip -2- in the direction of -arrow- from the mount -1- and insert a new one.

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- Clean the viewing window on the windshield with Cleaning Solution -D 009 401 04-.
- Calibrate the driver assistance systems front camera. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 44; Driver Assistance Systems Front Camera; Driver Assistance Systems Front Camera, Calibrating.



8 Cigarette Lighter and Socket

- ⇒ -8.1 Cigarette Lighter, 12 V Socket", page 221
- ⇒ C8.2 igarette LighterU1, Removing and Installing", page 221
- ⇒ L8.3 ighter Illumination BulbL28, Removing and Installing", page 224
- ⇒ R8.4 emoving and Installing", page 225
- ⇒ R8.5 eplacing", page 225

8.1 Overview - Cigarette Lighter, 12 V Socket

1 - Trim

☐ For the Cigarette Lighter -U1-

2 - Cigarette Lighter Illumination Bulb -L28-

- ☐ For the Cigarette Lighter -U1-
- Removing and Installing. Refer to ⇒ L8.3 ighter Illumination BulbL28, Removing and Installing", page <u> 224</u> .

3 - Cigarette Lighter

4 - Cigarette Lighter -U1-

Removing and Installing. Refer to ⇒ C8.2 igarette LighterU1, Removing and Installing", <u>page 221</u> .

5 - Socket -U-

- □ Removing and Installing. Refer to ⇒ R8.4 emoving and Installing", page 225
- □ Replacing. Refer to ⇒ R8.5 eplacing", page

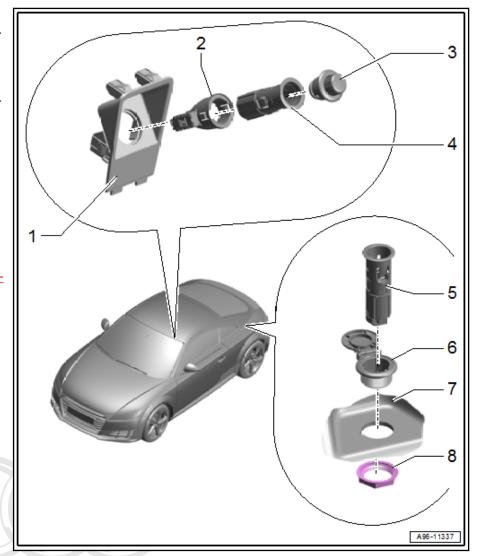
6 - Mount with Cover

☐ For Socket -U-

7 - Luggage Compartment Side Trim Panel

8 - Nut

□ 2 Nm

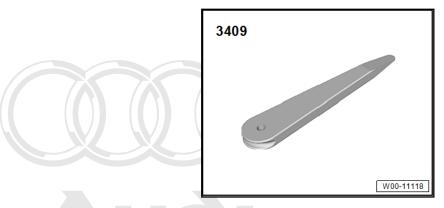


8.2 Cigarette Lighter -U1-, Removing and Installing

Special tools and workshop equipment requireds, in part or in whole, is not

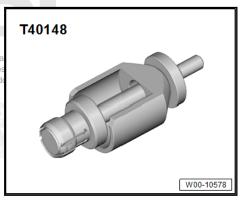
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Trim Removal Wedge -3409-

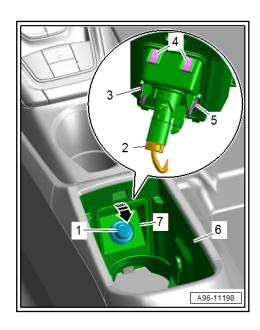


Cigarette Lighter Release Tool -T40148-

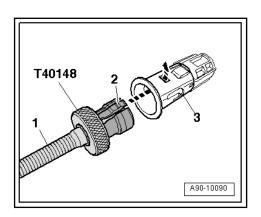
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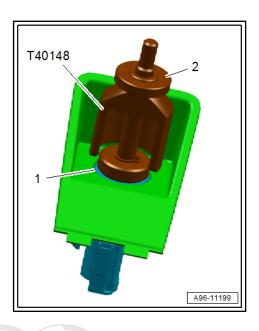
Removing



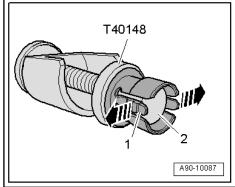
- Remove the lighter -1-.
- Using the Trim Removal Wedge -3409-, release the trim -7at the top in direction of -arrow- and disengage it at the storage compartment -6-.
- This releases the retainers -3, 4 and 5-.
- Disconnect the connector -2-.
- The release tabs -2- on the Cigarette Lighter Release Tool -T40148- must engage in the openings on the cigarette lighter -3- in direction of -arrow-. To do so, the threaded rod -1must be slid all the way down.



Slide the Cigarette Lighter Release Tool -T40148- all the way into the cigarette lighter -1-.

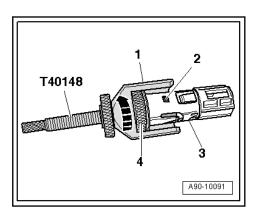


- Turn the thumbwheel -2- on the Cigarette Lighter Release Tool -T40148- clockwise all the way to the end stop.
- The piston -2- is pulled upward and the release tabs -1on the Cigarette Lighter Release Tool -T40148- spread in direction of -arrows-.



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- Remove the cigarette lighter using the Cigarette Lighter Release Tool -T40148- from the illumination ring with the Cigarette Lighter Illumination Bulb -L28-.
- Guide the wire out through the mount.



Install in the reverse order of removal while noting the following:



Caution

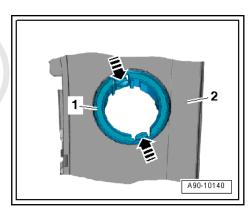
Risk of injury!

- After removing the Cigarette Lighter Release Tool -T40148-, check to see if the lighter retaining tabs are bent.
- If the retaining tabs are bent, bend them back so the lighter does not slide out.
- Remove the support -1- on the Cigarette Lighter Release Tool -T40148-.
- Slide the piston down and hold it in place.
- Turn the thumbwheel -4- on the Cigarette Lighter Release Tool -T40148- counter-clockwise -arrow-. This loosens the release tabs -2- on the cigarette lighter -3- so the Cigarette Lighter Release Tool -T40148- can be removed.

8.3 Cigarette Lighter Illumination Bulb - L28-, Removing and Installing

Removing





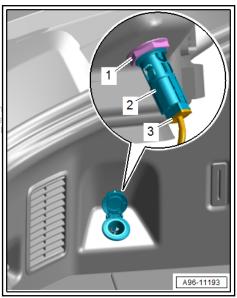
- Remove the cigarette lighter. Refer to 28.2 igarette Light or in whole, is not erU1, Removing and Installing by page 221D. AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Release the retainers in direction of -arrows-.
- Remove the illumination ring -1- with the Cigarette Lighter Illumination Bulb -L28- from the trim -2-.

Install in reverse order of removal.

8.4 Socket -U-, Removing and Installing

Removing

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- Detach the left luggage compartment side trim panel and move it to the side. Refer to ⇒ Body Interior; Rep. Gr. 70; Luggage Compartment Trim Panels; Luggage Compartment Side Trim Panel, Removing and Installing.
- Disconnect the connector -3-.
- Remove the nut -1-.
- Remove the 12 V socket -2- from the luggage compartment side trim panel.

Installing

Install in reverse order of removal.

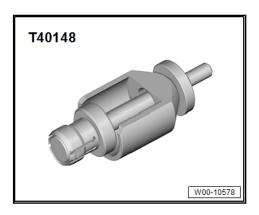
Tightening Specifications

◆ Refer to ⇒ -8.1 Cigarette Lighter, 12 V Socket", page 221

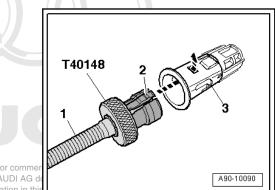
8.5 Socket -U-, Replacing

Special tools and workshop equipment required

◆ Cigarette Lighter Release Tool -T40148-

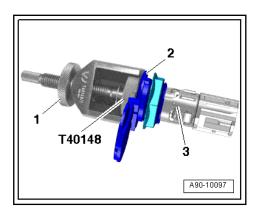


Removing

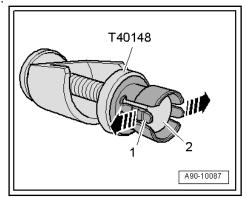


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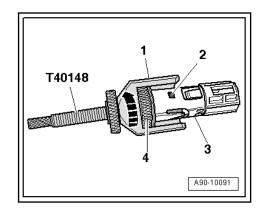
- The release tabs -2- on the Cigarette Lighter Release Tool -T40148- must engage in the 12 V socket openings -3--arrow-. To do so, the threaded rod -1- must be slid all the way down.
- Open the mount cover -2- and hold it in that position.



- Slide the Cigarette Lighter Release Tool -T40148- all the way into the 12 V socket -3-.
- Turn the thumbwheel -1- on the Cigarette Lighter Release Tool -T40148- clockwise all the way to the end stop.
- The piston -2- is pulled upward and the release tabs -1on the Cigarette Lighter Release Tool -T40148- spread in direction of -arrows-.



- Remove the 12 V socket from the luggage compartment side trim panel.
- Disconnect the connector.



Install in the reverse order of removal while noting the following:

- Remove the support -1- on the Cigarette Lighter Release Tool -T40148-.
- Slide the piston down and hold it in place.
- Turn the thumbwheel -4- on the Cigarette Lighter Release Tool -T40148- counter-clockwise -arrow-. This loosens the release tabs -2- on the 12 V socket -3- so the Cigarette Lighter Release Tool -T40148- can be removed.



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Wiring

- Relay Panels, Fuse Panels and E-**Boxes**
- ⇒ L1.1 ocation Overview Relay Panels, Fuse Panels and E-Boxes", page 228
- ⇒ R1.2 emoving and Installing", page 230
- ⇒ R1.3 emoving and Installing", page 232
- ⇒ P1.4 anel BSB in E-Box, Removing and Installing", page 233
- ⇒ P1.5 anel ASA, Removing and Installing", page 235
- ⇒ P1.6 anel CSC Under Left Instrument Panel, Removing and Installing", page 236
- ⇒ E1.7 lectrical System Control Module Bracket, Removing and Installing", page 237
- ⇒ M1.8 odule Bracket, Removing and Installing", page 240
- 1.1 Component Location Overview - Relay Panels, Fuse Panels and E-Boxes
- ⇒ L1.1.1 ocation Overview Relay Panels, Fuse Panels and E-Box", page 228
- ⇒ L1.1.2 ocation Overview A-Pillar Relay Panel and Instrument Panel Fuse Panel", page 229
- Component Location Overview Relay Panels, Fuse Panels and E-Box 1.1.1



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- 1 Front Cover
 - for E-box
- 2 Nut
 - □ 9 Nm
- 3 Nut
 - □ 9 Nm
- 4 Line
 - □ 4.5 Nm
 - For radiator fan
- 5 Line
 - □ 4.5 Nm
 - □ For terminal 30
- 6 Line
 - □ 4.5 Nm
 - For electromechanical power steering
- 7 Line
 - □ 6 Nm
 - □ For battery B+
- 8 Line
 - □ 4.5 Nm
 - ☐ For terminal 30
- 9 Line
 - □ 6 Nm
 - For the generator

10 - Fuse Panel A -SA-

Removing and Installing. Refer to P1.5 anel ASA, Removing and Installing", page 235.

12 13 10 15 8 16 A97-11232

11 - Fuse Block

□ Removing and Installing. Refer to ⇒ P1.5 anel ASA, Removing and Installing", page 235.

12 - Cover

□ For E-box

13 - Relay and Fuse Panel B -SB-

- With connecting bracket for fuse panel A
- Removing and Installing. Refer to ⇒ P1.4 anel BSB in E-Box, Removing and Installing", page 233.

14 - Line

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15 - Bracket

□ For the engine control module

16 - E-Box

□ Removing and Installing. Refer to ⇒ R1.2 emoving and Installing", page 230.

1.1.2 Component Location Overview - A-Pillar Relay Panel and Instrument **Panel Fuse Panel**

1 - Bracket

- ☐ For vehicle electrical system control module
- □ Removing and Installing. Refer to E1.7 lectrical System Control Module Bracket, Removing and Installing", page 237.

2 - Bracket

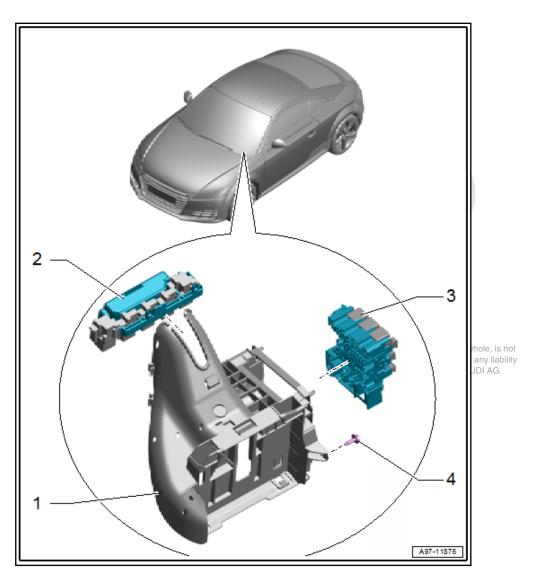
- ☐ For the control module
- Only for LHD vehicles
- □ Removing and Installing. Refer to ⇒ M1.8 odule Bracket, Removing and Installing", page 240

3 - Fuse Panel C -SC-

Removing and Installing. Refer to P1.6 anel CSC Under eft Instrument Panel, Removing and Installing", page 236.

4 - Bolt

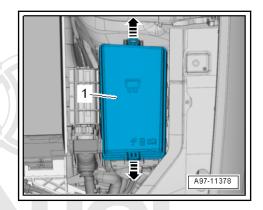
- □ 3 Nm
- Quantity: 3



1.2 E-Box, Removing and Installing

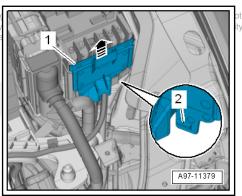
Removing

- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Connecting", page 9.
- Remove the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing or ⇒ Engine Mechanical; Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Remove the engine control module and set it aside with the connectors attached. Refer to ⇒ Engine Mechanical; Rep. Gr. 23; Engine Control Module; Engine Control Module -J623-, Removing and Installing or ⇒ Engine Mechanical; Rep. Gr. 24; Engine Control Module; Engine Control Module -J623-, Removing and Installing.
- Press the release buttons in direction of -arrow- and remove the cover -1- for the engine compartment E-box.

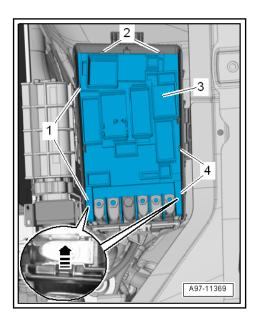


Using a screwdriver, release the tab -2- and remove the front cover -1- upward in direction of -arrow-.

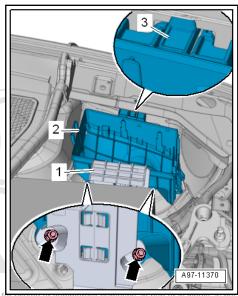




- Cut the lower cable ties on the wiring harness.



- Release the retainers -1, 2 and 4- in direction of -arrow-, remove and set aside the fuse panel B -3-.
- Remove the nuts -arrows- and then remove the engine control module bracket -1-.



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- Release the tab -3- and disengage the engine comparities unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Release the tab -3- and disengage the engine comparities of information in this document. Copyright by AUDI AG. E-box -2- at the threaded pins.
- Remove the engine compartment E-box upward.

Installing

Install in the reverse order of removal while noting the following:

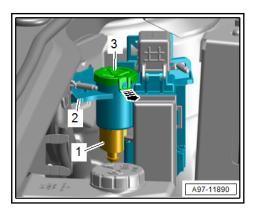
Connect the battery. Required actions. Refer to ⇒ page 10.

Tightening Specifications

Refer to ⇒ L1.1.1 ocation Overview - Relay Panels, Fuse Panels and E-Box", page 228

Suppressor -C24-, Removing and In-1.3 stalling

Removing



- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Connecting", page 9
- Disconnect the connector -1-.
- Release the retainers in direction of -arrow- and remove the cover -3-.
- Push the suppressor upward and out of the housing -2- from below and remove it.



Install in reverse order of removal and note the following:

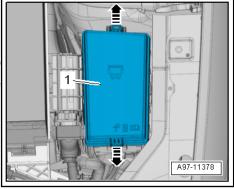
Connect the battery. Required actions. Refer to ⇒ page 10.

1.4 Fuse Panel B -SB- in E-Box, Removing and Installing

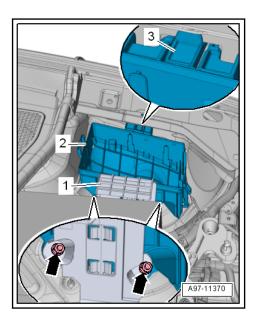
Removing

- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Con-
- Remove the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing or ⇒ Engine Mechanical; Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Press the release buttons in direction of -arrow- and remove the cover -1- for the engine compartment E-box.

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Vehicles with LED Headlamps:



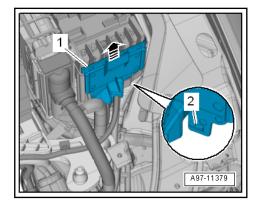
Remove the engine control module and set it aside with the connectors attached. Refer to ⇒ Engine Mechanical; Rep. Gr. 23; Engine Control Module; Engine Control Module -J623-, Removing and Installing or ⇒ Engine Mechanical; Rep. Gr. 24; Engine Control Module; Engine Control Module -J623-, Removing and Installing.

- Remove the nuts -arrows- and then remove the engine control module bracket -1-.
- Open the tab -3- and disengage the engine compartment E-box -2- from the threaded pin and push as far as possible to the right side of the vehicle.

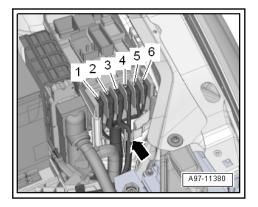
Continuation for All Vehicles:

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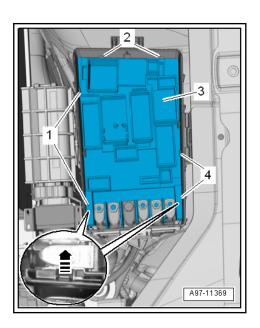




- Using a screwdriver, release the tab -2- and remove the front cover -1- upward in direction of -arrow-.
- Mark the wires at the threaded connections for reinstallation.



- Remove the nuts -1, 2, 4, 5 and 6- and bolt -3- and free up the wires -arrow-.
- Cut the lower cable ties on the wiring harness.





Release the retainers -1, 2 and 4- in direction of -arrow- and remove the fuse panel B -3-.

Installing

Install in the reverse order of removal while noting the following:

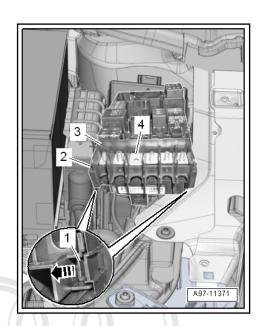
- Attach and tighten the wires according to the markings on fuse panel A.
- Connect the battery. Required actions. Refer to ⇒ page 10.

Tightening Specifications

Refer to ⇒ L1.1.1 ocation Overview - Relay Panels, Fuse Panels and E-Box", page 228

1.5 Fuse Panel A -SA-, Removing and Installing

Removing



- Remove the fuse panel B. Refer to ⇒ P1.4 anel BSB in E-Box, Removing and Installing", page 233
- Remove the fuse block -4- upward from the fuse panel B.
- Release the tabs -1- in direction of -arrow- and remove fuse panel A -2- downward from fuse panel B -3-.

Installing

Install in reverse order of removal.

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1.6 Fuse Panel C -SC- Under Left Instrument Panel, Removing and Installing

⇒ P1.6.1 anel CSC Under Left Instrument Panel, Removing and Installing", page 236

⇒ P1.6.2 anel CSC Under Left Instrument Panel, Removing and Installing, RHD", page 236

1.6.1 Fuse Panel C -SC- Under Left Instrument Panel, Removing and Installing

Removing



- Remove the driver side instrument panel cover. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Driver Side Instrument Panel Cover, Removing and Installing.
- Release the tabs -2 and 4- in direction of -A arrows-.
- Pull fuse panel C -item 3- toward the rear out of the bracket -1- in direction of -arrow B-.
- Remove the wires.



Note

Check the exact assignment in the current wiring diagram. Refer to ⇒ Wiring diagrams, Troubleshooting & Component locations.

Installing

Install in reverse order of removal.

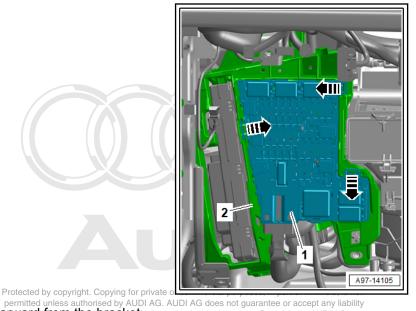
1.6.2 Fuse Panel C -SC- Under Left Instrument Panel, Removing and Installing, RHD

Removing

Remove the glove compartment. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Glove Compartment, Removing and Installing.



Open the tabs -arrows-.



- Remove the fuse panel C -item 1- rearwardsfrom the bracket information in this document. Copyright by AUDI AG. -2-.
- Remove the wires.



Note

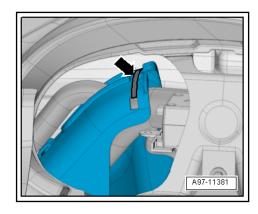
Check the exact assignment in the current wiring diagram. Refer to ⇒ Wiring diagrams, Troubleshooting & Component locations.

Installing

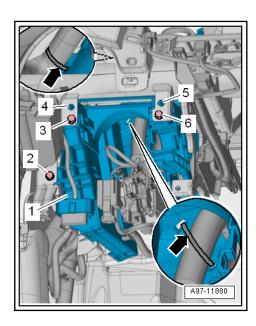
Install in reverse order of removal.

- 1.7 Vehicle Electrical System Control Module Bracket, Removing and Installing
- ⇒ E1.7.1 lectrical System Control Module Bracket, Removing and Installing", page 237
- ⇒ E1.7.2 lectrical System Control Module Bracket, Removing and Installing, RHD", page 239
- Vehicle Electrical System Control Mod-1.7.1 ule Bracket, Removing and Installing

Removing



- Remove the instrument cluster. Refer to \Rightarrow C1.2 luster with Instrument Cluster Control Module J285, Removing and Installing", page 38.
- North American market-specific: remove the driver side knee airbag. Refer to ⇒ Body Interior; Rep. Gr. 69; Knee Airbags; Knee Airbag with Igniter, Removing and Installing.
- Cut the cable tie -arrow-.
- Disengage fuse panel C and push it aside. Refer to ≥ P1.6.1 anel CSC Under Left Instrument Panel, Removing and Installing", page 236
- Remove the Front Parking Aid Warning Buzzer -H22-. Refer to > P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not to > P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not to - P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not to - P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not to - P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not to - P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not to - P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not to - P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not to - P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not to - P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not to - P8.3.1 arking Aid Warhing Buzzer 1922. Respirity part or in whole, is not be a simple and the respirity part or in whole, is not be a simple and the respirity part or in whole, is not be a simple arking a simple Installing", page to the correctness of information in this document. Copyright by AUDI AG.
- Remove the Vehicle Electrical System Control Module -J519-. Refer to ⇒ E2.3 lectrical System Control ModuleJ519, Removing and Installing", page 245.
- Remove the bolts -2, 3 and 6-.



- Push the bracket -1- far enough forward from the crossmember until the alignment pins -4 and 5- are disengaged.
- Cut the cable ties -arrows-.
- Free up the wiring harness on the mount.
- Remove the bracket to the vehicle interior.

Install in reverse order of removal.

Tightening Specifications

Refer to ⇒ L1.1.2 ocation Overview - A-Pillar Relay Panel and Instrument Panel Fuse Panel", page 229



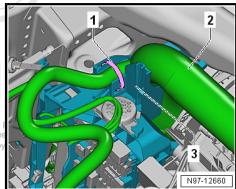
1.7.2 Vehicle Electrical System Control Module Bracket, Removing and Installing, **RHD**

Removing

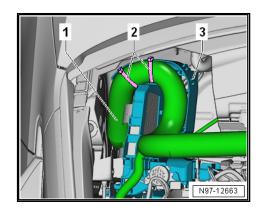
- Remove the instrument panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Instrument Panel; Instrument Panel, Removing and Installing.
- Remove fuse panel C. Refer to ⇒ P1.6.2 anel CSC Under Left Instrument Panel, Removing and Installing, RHD", page
- Cut the cable tie -1-.



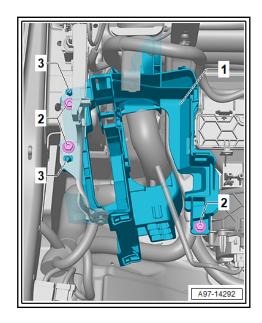
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- Loosen the wiring harness -2- from the bracket -3-.
- Cut the cable tie -2-.



- Remove the wiring harness -1- from the bracket -3-.
- Coupe: remove the Front Parking Aid Warning Buzzer -H22-. Refer to ⇒ P8.3.2 arking Aid Warning BuzzerH22, Removing and Installing, RHD, Coupe", page 144
- Remove the Vehicle Electrical System Control Module -J519-. Refer to ⇒ E2.3 lectrical System Control ModuleJ519, Removing and Installing", page 245.
- Remove the bolts -2-.



- Push the bracket -1- far enough forward from the crossmember until the alignment pins -3- are disengaged.
- If necessary, then cut the present cable ties.
- Free up the wiring harness on the mount.
- Remove the bracket to the vehicle interior.

Install in reverse order of removal.

Tightening Specifications

◆ Refer to ⇒ L1.1.2 ocation Overview - A-Pillar Relay Panel and Instrument Panel Fuse Panel", page 229

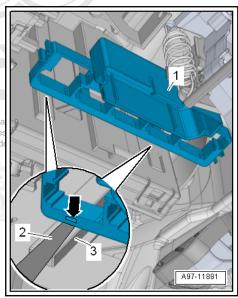
1.8 Control Module Bracket, Removing and Installing

Special tools and workshop equipment required

♦ Feeler Gauge

Removing

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- North American market-specific: remove the driver side knee airbag. Refer to ⇒ Body Interior; Rep. Gr. 69; Knee Airbags; Knee Airbag with Igniter, Removing and Installing.
- Remove fuse panel C and set aside. Refer to ⇒ P1.6 anel CSC Under Left Instrument Panel, Removing and Installing", page 236.
- If installed: remove the parking aid control module/parallel parking assistance control module. Refer to ⇒ A8.2.1 id Control ModuleJ446 Removing and Installing", page 142.
- To loosen the retainers, insert a 0.9 mm feeler gauge -2behind the opening -arrow- as shown.
- Remove the bracket -1- downward from the bracket for the vehicle electrical system control module -3-.

Install in reverse order of removal.



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2 **Control Modules**

- ⇒ L2.1 ocation Overview Control Modules", page 242
- ⇒ -2.2 Data Bus on Board Diagnostic Interface", page 244
- ⇒ E2.3 lectrical System Control ModuleJ519, Removing and Installing", page 245
- ⇒ D2.4 oor Opener Control Module, Removing and Installing", page 247
- ⇒ B2.5 us on Board Diagnostic InterfaceJ533, Removing and Installing", page 249

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- Component Location Overview into Component Copyright by AUDI AG does not guarantee or accept any liability Component Copyright by AUDI AG. 2.1 trol Modules
- ⇒ L2.1.1 ocation Overview Control Modules, Vehicle Electrical System Control Module", page 242
- ⇒ L2.1.2 ocation Overview Control Modules, Garage Door Opener", page 243
- Component Location Overview Control Modules, Vehicle Electrical Sys-2.1.1 tem Control Module



1 - Control Module

Only for LHD vehicles

Versions with Parking Aid:

- ☐ Parking Aid Control Module -J446-
- Overview. Refer to ⇒ -8.1 Parking Aid", page

Versions with Parallel Parking Assist:

- □ Parallel Parking Assistance Control Module -J791-
- Overview. Refer to ⇒ -9.1 Parallel Parking Assist", page 150

2 - Bracket

- □ For the control module
- Only for LHD vehicles
- Overview. Refer to ⇒ L1.1.1 ocation Overview - Relay Panels, Fuse Panels and E-Box", page 228.

3 - Bracket

- ☐ For vehicle electrical system control module
- Overview. Refer to ⇒ L1.1.1 ocation Overview - Relay Panels, Fuse Panels and E-Box", page 228

4 - Vehicle Electrical System Control Module -J519-

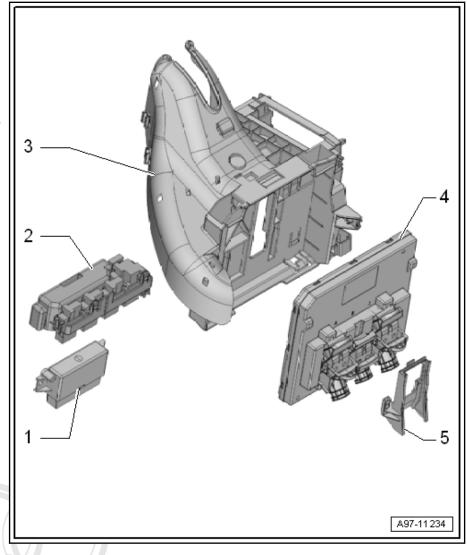
□ Removing and Installing. Refer to ⇒ E2.3 lectrical System Control ModuleJ519, Removing and Installing", page 245

5 - Guide

□ For the center connector

Component Location Overview - Control Modules, Garage Door Opener 2.1.2 Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Protected

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1 - Garage Door Opener Control Module -J530-

□ Removing and Installing. Refer to ≥ D2.4.1 oor Opener Control Module, Removing and Installing", page 247.

2 - Mount

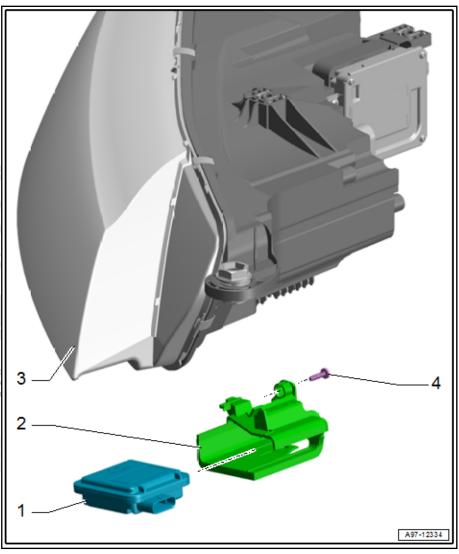
- ☐ For the Garage Door Opener Control Module -J530-
- □ Removing and Installing. Refer to 🖢 D2.4.2 oor Opener Control Module Mount, Removing and Installing", page 248

3 - Right Headlamp

4 - Bolt

☐ 1.2 Nm

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Overview - Data Bus on Board Diagnostic Interface 2.2



1 - Connector

For the Data Bus on Board Diagnostic Interface -J533-

2 - Data Bus on Board Diagnostic Interface -J533-

□ Removing and Installing. Refer to ⇒ B2.5 us on Board Diagnostic InterfaceJ533, Removing and Installing", page 249

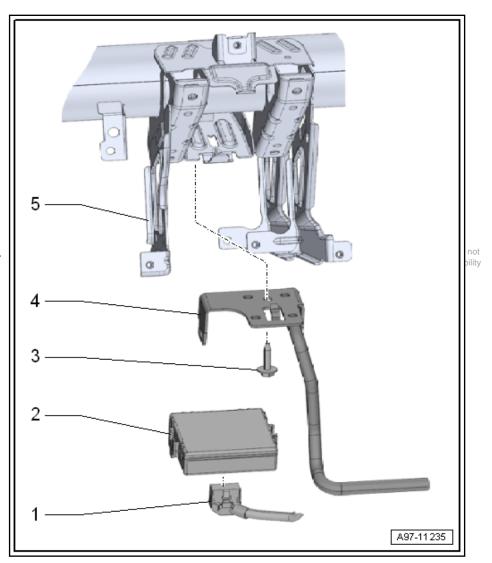
3 - Bolt

□ Tightening specification. Refer to ⇒ Body Interior; Rep. Gr. 70; Instrument Panel Crossmember; Overview - Instrument Panel Crossmember.

4 - Crash Bolster

Overview. Refer to ⇒ Body Interior; Rep. Gr. 70; Instrument Panel Crossmember; Overview - Instrument Panel Crossmember.

5 - Instrument Panel Crossmember



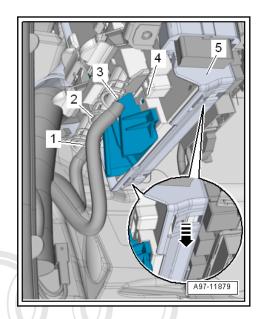
Vehicle Electrical System Control Mod-2.3 ule -J519-, Removing and Installing



Note

If replacing the control module, select the "Replace control module" function for the corresponding control module on the ⇒ Vehicle diagnostic tester.

Removing

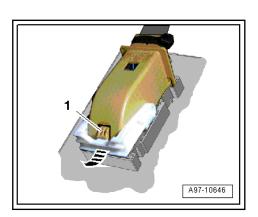


LHD Vehicles:

Remove the driver side instrument panel cover. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Driver Side Instrument Panel Cover, Removing and Installing.

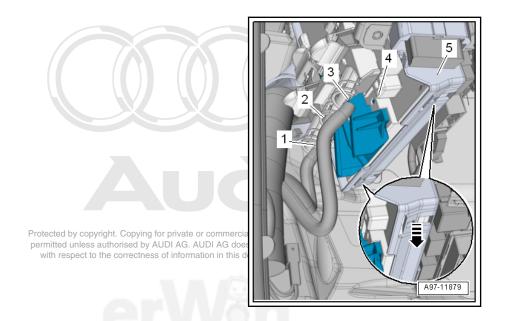
RHD Vehicle:

- Remove the glove compartment. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Glove Compartment, Removing and Installing Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability
- Remove the A-pillar lower trim panel. Refer to Body Interess of information in this document. Copyright by AUDI AG. or; Rep. Gr. 70; Vehicle Interior Trim Panels.
- Disconnect the connectors -1, 2 and 3-.
- To disconnect the connector, press the tab -1-, turn the retaining bracket in direction of -arrow- and remove the connector.



Release the springs in direction of -arrow-, pivot the vehicle electrical system control module -4- out of the bracket -5and remove it downward.





Installing

Install in reverse order of removal.

2.4 Garage Door Opener Control Module, Removing and Installing

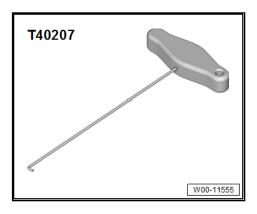
⇒ D2.4.1 oor Opener Control Module, Removing and Installing", page 247

⇒ D2.4.2 oor Opener Control Module Mount, Removing and Installing", page 248

Garage Door Opener Control Module, 2.4.1 Removing and Installing

Special tools and workshop equipment required

♦ Hook Tool -T40207-

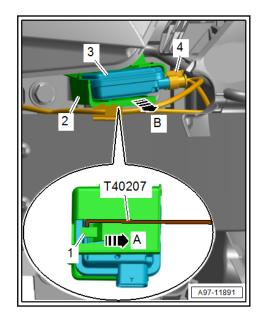




Note

If replacing the control module, select the "Replace control module" function for the corresponding control module on the ⇒ Vehicle diagnostic tester.

Removing

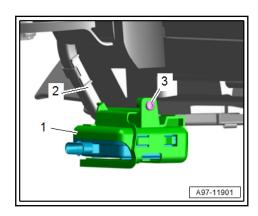


- Remove the front bumper cover. Refer to ⇒ Body Exterior; Rep. Gr. 63; Front Bumper; Bumper Cover, Removing and Installing.
- Release the tab -1- using the Hook Tool -T40207- in direction of -arrow A-.
- Remove the control module -3- from the mount -2- in direction of -arrow B-.
- Disconnect the connector -4-.

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Garage Door Opener Control Module 2.4.2 Mount, Removing and Installing

Removing



- Remove the headlamp. Refer to ⇒ R1.2.1 emoving and Installing", page 75.
- Remove the bolt -3-.
- Remove the mount -1- from the headlamp housing -2-.

Installing

Install in reverse order of removal.



Tightening Specifications

Refer to ⇒ L2.1.2 ocation Overview - Control Modules, Garage Door Opener", page 243

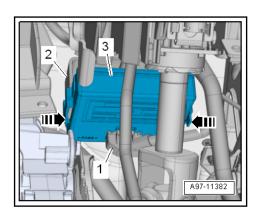
2.5 Data Bus on Board Diagnostic Interface -J533-, Removing and Installing



Note

If replacing the control module, select the "Replace control module" function for the corresponding control module on the ⇒ Vehicle diagnostic tester.

Removing



- Remove the driver side instrument panel cover. Refer to ⇒ Body Interior; Rep. Gr. 68; Storage Compartments and Covers; Driver Side Instrument Panel Cover, Removing and Installing.
- North American market-specific: remove the driver side knee airbag. Refer to ⇒ Body Interior; Rep. Gr. 69; Knee Airbags; Knee Airbag with Igniter, Removing and Installing.
- Reach upward behind the pedal bracket to disconnect the connector -1-.
- To disconnect the connector, press the tab, turn the retaining bracket and remove the connector.
- Release the retainers in direction of -arrows- and remove the Data Bus On Board Diagnostic Interface -J533- -3- downward from the bracket -2-.



Note

Check the exact assignment in the current wiring diagram. Refer to ⇒ Wiring diagrams, Troubleshooting & Component locations.

Installing

Install in reverse order of removal.

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- Refer to 3-2.2 Data Bus on Board Diagnostic Interface. page 244
- ⇒ Wiring diagrams, Troubleshooting & Component locations

3 Connectors

- ⇒ L3.1 ocation Overview Connectors", page 250
- ⇒ D3.2 oor Cut-Off Connector, Disconnecting", page 251
- ⇒ A3.3 -Pillar Connector Station, Removing and Installing", page 251
- ⇒ A3.4 -Pillar Connector Station, Removing and Installing", page 252
- ⇒ H3.5 arnesses and Connectors, Repairing", page 253

3.1 **Component Location Overview - Connectors**

1 - Right A-Pillar Connector Station

□ Removing and Installing. Refer to ⇒ A3.4 -Pillar Connector Station, Removing and Installing", page 252. Protect permit

2 - Right Front Door Cut-Offwith Connector

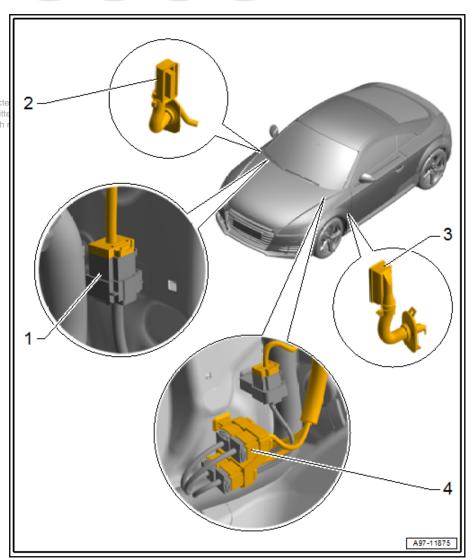
☐ Disconnecting. Refer to ⇒ D3.2 oor Cut-Off Connector, Disconnecting", page 251.

3 - Left Front Door Cut-Off Connector

Disconnecting. Refer to ⇒ D3.2 oor Cut-Off Connector, Disconnecting", page 251.

4 - Left A-Pillar Connector Station

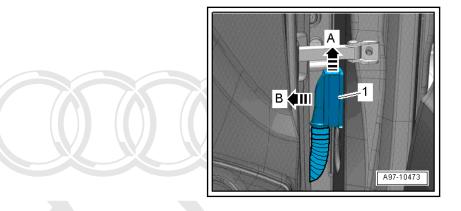
□ Removing and Installing. Refer to ⇒ A3.3 -Pillar Connector Station, Removing and Installing", page 251.





3.2 Left Door Cut-Off Connector, Disconnecting

Procedure





Note

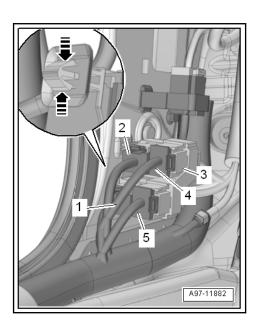
The removal and installation is the same for both sides.

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- Open the door.
- Release the connector safety catch in the direction of -arrow A- and remove the door cut-off connector -1- outward in direction of -arrow B-.

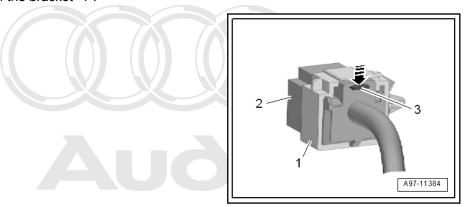
Left A-Pillar Connector Station, Re-3.3 moving and Installing

Removing



- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Connecting", page 9.
- Remove the A-pillar lower trim panel. Refer to \Rightarrow Body Interior; Rep. Gr. 70; Vehicle Interior Trim Panels.
- Release the retainers in direction of -arrows- and disengage the connector station -3- at the A-pillar.

- Disconnect the connectors -1, 2, 4 and 5-.
- Release the retainer -3- in direction of -arrow- and push the connector terminal -2- out of the bracket -1-.







Note

Check the exact assignment in the current wiring diagram. Refer to ⇒ Wiring diagrams, Troubleshooting & Component locations.

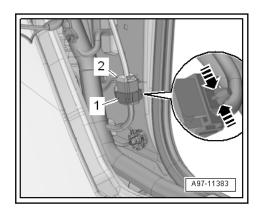
Installing

Install in the reverse order of removal while noting the following:

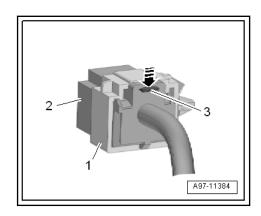
Connect the battery. Required actions. Refer to ⇒ page 10.

Right A-Pillar Connector Station, Re-3.4 moving and Installing

Removing



- Disconnect the ground cable from the battery when the ignition is switched off. Refer to ⇒ D1.2 isconnecting and Connecting", page 9.
- Remove the A-pillar lower trim panel. Refer to ⇒ Body Interior; Rep. Gr. 70; Vehicle Interior Trim Panels.
- Release the retainers in direction of -arrows- and disengage the connector station -1- at the A-pillar.
- Disconnect the connector -2-.
- Release the retainer -3- in direction of -arrow- and push the connector terminal -2- out of the bracket -1-.





Note

Check the exact connector assignment in the current wiring diagram. Refer to ⇒ Wiring diagrams, Troubleshooting & Component locations.

Installing

Install in the reverse order of removal while noting the following:

Connect the battery. Required actions. Refer to <u>⇒ page 10</u>.

3.5 Wiring Harnesses and Connectors, Repairing

Refer to ⇒ Electrical Equipment General Information; Rep. Gr. 97; Wiring Harness and Connector Repair; Wiring Harnesses, Repairing.



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Connector Housings, Releasing and 4 Disassembling

Refer to ⇒ Electrical Equipment General Information; Rep. Gr. 97; Wiring Harness and Connector Repairs; Connector Housings, Releasing and Disassembling.



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Contact Surfaces, Cleaning 5

Refer to \Rightarrow Electrical Equipment General Information; Rep. Gr. 97; Contact Surface Cleaning Set -VAS6410- .



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Antenna Wires, Repairing 6

Refer to ⇒ Electrical Equipment General Information; Rep. Gr. 97; Wiring Harness and Connector Repair; Antenna Wires, Repairing.



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Fiber-Optic Cable 7

Refer to ⇒ Electrical Equipment General Information; Rep. Gr. 97; Wiring Harness and Connector Repair; Fiber-Optic Cables, Repairing.



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Vehicle Diagnostic Tester 8

Refer to \Rightarrow Electrical Equipment General Information; Rep. Gr. 97; Vehicle Diagnostic Tester.

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Cautions & Warnings

Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described
 in this manual, we suggest you leave such repairs to an authorized Audi retailer or other
 qualified shop. We especially urge you to consult an authorized Audi retailer before beginning
 repairs on any vehicle that may still be covered wholly or in part by any of the extensive
 warranties issued by Audi.
- Disconnect the battery negative terminal (ground strap) whenever you work on the fuel system
 or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an
 approved fire extinguisher handy.

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- Audi is constantly improving its vehicles and sometimes these changes, both in parts and socument. Copyright by AUDI AG. specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only. Always check with your authorized Audi retailer parts department for the latest information.
- Any time the battery has been disconnected on an automatic transmission vehicle, it will be necessary to reestablish Transmission Control Module (TCM) basic settings using the Audi Factory Approved Scan Tool (ST).
- Never work under a lifted vehicle unless it is solidly supported on stands designed for the
 purpose. Do not support a vehicle on cinder blocks, hollow tiles or other props that may
 crumble under continuous load. Never work under a vehicle that is supported solely by a jack.
 Never work under the vehicle while the engine is running.
- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code before disconnecting the battery or removing the radio. If the wrong code is entered when the power is restored, the radio may lock up and become inoperable, even if the correct code is used in a later attempt.
- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it.
- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of
 injury to yourself and others if you are tired, upset or have taken medicine or any other
 substances that may impair you or keep you from being fully alert.
- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.
- Always observe good workshop practices. Wear goggles when you operate machine tools or work with acid. Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.
- Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace
 when you work near machine tools or running engines. If your hair, clothing, or jewelry were to
 get caught in the machinery, severe injury could result.

Cautions & Warnings

- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are
 designed to be used only once and are unreliable and may fail if used a second time. This
 includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the
 recommendations in this manual replace these fasteners with new parts where indicated,
 and any other time it is deemed necessary by inspection.
- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.
- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.
- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.
- Before starting a job, make certain that you have all the necessary tools and parts on hand.
 Read all the instructions thoroughly, do not attempt shortcuts. Use tools that are appropriate to the work and use only replacement parts meeting Audi specifications. Makeshift tools, parts and procedures will not make good repairs.
- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.
- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these
 tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten
 fasteners to the tightening torque listed.
- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping
 hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the
 proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a
 stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.
- Preter The air conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The permitted colors authorised by AUDIA does not predict the color of the permitted colors authorised by AUDIA does not predict the color of the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the permitted colors authorised by AUDIA does not predict the predict the permitted colors authorised by AUDIA does not predict the predic
 - Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), disconnect the battery negative terminal (ground strap) and the ABS control module connector.
 - Do not expose any part of the A/C system to high temperatures such as open flame.
 Excessive heat will increase system pressure and may cause the system to burst.

Cautions & Warnings

- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).
- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Audi Service technicians should test, disassemble or service the airbag system.
- Do not quick-charge-the battery (for boost starting) for longer than one minute; and do not
 exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute
 before boosting the battery a second time.
- Never use a test light to conduct electrical tests of the airbag system. The system must only
 be tested by trained Audi Service technicians using the Audi Factory Approved Scan Tool (ST)
 or an approved equivalent. The airbag unit must never be electrically tested while it is not
 installed in the vehicle.
- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire
 that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other
 sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times
 before breaking the bead from the rim. Completely remove the tire from the rim before
 attempting any repair.
- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

I have read and I understand these Cautions and Warnings.